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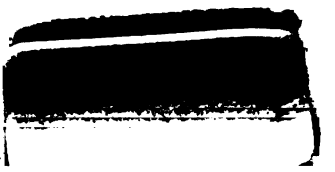

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C P Huntington

CHRONICLES

OF

THE BUILDERS

OF THE

COMMONWEALTH

Historical Character Study

BY

HUBERT HOWE BANCROFT

VOLUME V

SAN FRANCISCO
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CHAPTER I.

ROUTES AND TRANSPORTATION—INTRODUCTORY.

EARLY MOVEMENTS AND MIGRATIONS OF PEOPLES—DISCOVERY OF AMERICA AND VOYAGES OF CIRCUMNAVIGATION—CONTINENTAL TRAVEL AND INFLUENCE OF THE ISTHMUSES—SPREAD OF INTELLIGENCE—BUILDING OF TOWNS—TIDE OF TRAFFIC—ROADS AND RAILROADS.

THE westward march of empire, as emphasized in the expansion of the United States domain, may be traced back to the generally accepted migration of the Aryans, which was followed by certain Turanian pursuits and invasions, causing such partial refluxes as the crusades, which sought in vain to stem the current. A long, mediæval repose supervened, which was broken by a momentous revival of maritime expeditions under the Portuguese.

Migration had been stayed by the sea at the western world's end, to drop to minor movements confined within circuitous areas. The indented outline of Europe favored intercourse by water, but the progress of navigation was slow, long depending on oared galleys, with only a partial use of sails, and the compass still unknown. Hence, seamen skirted the coasts, as for example the Phœnicians, on the way to their Ultima Thule, and round the dark continent. The vikings on their depredatory tours struck across the deep with a certain boldness into the North sea, or Mediterranean, or even to America.

The attempt of the Portuguese was a new departure rather than a revival, and owed its origin to a great extent to the scientific awakening which had brought improved methods to navigation, notably in the com-

pass. It resulted in the discovery of America. Enterprise received a great stimulus from the opening of so vast a field for traffic and adventure, for conquest, commerce, and settlement. Exploring vessels increased in number, and became trading fleets; stately galleons took the place of the ancient ships of the desert and levantine caravans; rakish pirate craft followed like sharks in their wake; stately clippers vied with freight steamers in the rush of traffic, connecting with the railway to form a girdle round the world, and reduce its circumnavigation in time to a few weeks.

The first direction of the current of population in America was from the southeast to the northwest, to the silver regions, and in search of the ever-eluding interoceanic passage. The great interior remained for centuries impenetrable, by reason of hostile savages and other barriers. The movement therefore followed the seaboard, and this in America endowed the discoverers with something of the supernatural in the eyes of the natives, for sails and sea-going vessels were unknown to the aborigines. Balsas or rafts, dugouts or canoes, rarely of any great size, were their sole water craft, which appeared insignificant before the huge, winged ocean-houses of the strangers. The trappers adopted largely the native birch canoe, though using also regular boats for their river expeditions. With these they gradually pushed across the continent, shooting the rapids of unknown streams, and forming by the opening of the present century routes of travel, with boatmen or voyageurs between the two oceans.

A similar route was established between Europe and the orient and the Spanish western main, by means of formidable galleons, ponderous and heavily armed, for defence against the numerous marauders attracted by their rich cargoes of treasures and spices. They gave rise, in fact, to the notorious buccaneers, who from their lairs in the West Indies ravaged both

sea and coast, and contributed not a little to the decline of maritime enterprise among the creoles.

With less need for water traffic in his portion of the new domain, the Anglo-Saxon retained the viking's love of navigation. He preferred smaller and swifter craft, adapting himself to circumstances, however, and launching in due time the stately clipper, which surpassed all ocean vessels in beauty and speed. It met the requirements of progress, reducing the passage from New England to California to three or four months. The northern Pacific coast favors sailing vessels with its steady trade winds, so that the steamer with its costly coal is less indispensable than might be expected from the bustling disposition of the inhabitants.

The ocean steamer came just in time to assist the greatest of migrations—to the new El Dorado. Indeed, it drew the passenger traffic from the Cape Horn route, and left the tedious overland journey with its hardships chiefly to travellers from the western states. The difference in time likewise gave steamers a share in the transportation of freight, of which they were deprived to some extent in their turn by the railway, though the Pacific mail company found some compensation in the augmenting intercourse with the trans-pacific countries.

On the inland and coast waters steamers multiplied rapidly after 1849, and, reënforced by the shallow stern-wheeler, they pushed the head of river navigation to Red Bluff on the Sacramento, to Yale on the Fraser, for 150 miles along the Stikeen, to Fort Benton on the Missouri, and far up the Colorado and other streams, providing facilities and cheaper rates in all directions—boons alike to the interior of British Columbia and Montana, and to Arizona and Spanish America. Each step in advance was marked by the extension of surveys, the improvement of harbors, the dredging of rivers, and the erection of lighthouses, which tended to lessen the risk attendant on traffic in

strange waters. Yet the recklessness bred by competition was chiefly to blame for accidents. The consolidation of rival interests,as effected in Oregon, California, and elsewhere, while adding to the tax upon the public, provided superior accommodations.

Few navigable canals have as yet been constructed on the Pacific coast. Oregon has its river locks, which serve to open a wide region extending to join different states, besides promoting intercourse with transmontane territories. In several directions irrigation canals promise to become important factors in moving products, as illustrated by the timber flume, which renders accessible remote and otherwise useless mountain forests, thus cheapening lumber in those localities. In the south the idea is taking the imposing form of interoceanic communication, the dream of civilization since the days of Columbus. The belief in a natural passage between the two seas was held until the last decade of the preceding century. Explorations of the isthmuses were made to seek an artificial remedy. At Panamá the problem has obtained a partial solution since the fifties, in the railway which it is hoped may be followed by a ship canal in due time. The ancient Nahuas were well advanced in this direction on a small scale, for Tenochtitlan boasted its canals, with locks and basins, to accommodate the rush of canoes from the several lakes of the valley, which were connected by passages. Their suspension bridges, although flimsy, possessed intrinsic scientific merits, which might in time have borne better fruit.

The roads, rivers, and trails across isthmuses constituted for over two centuries the great arteries for American traffic. Then began the straight latitudinal advance under the fur-traders, who opened routes for the migration soon to follow. The Nahuas and Mayas, unlike the Peruvians, possessed no beasts of burden, and their not inconsiderable intercourse

by land had to be performed with caravans of carriers unaided even by a wheel.

The well-paved causeways and roads exhibited by them in several districts were long unequalled by the indolent Spaniards, chiefly from the prevalence of conveyance by mule-trains, in accordance with the custom of the peninsula. The system harmonized likewise with the tastes of the creole, whose eye for the picturesque dwelt upon the serpentine course of the train as it wound along by the cliffs and hillsides, riders and animals alike often arrayed in gay trappings, the course being marked by the tuneful jingle of the leader's bell. In California it prevailed during the period of flush times, and in Colorado and other mountain regions it proved indispensable.

The Anglo-Saxon on the other hand adhered firmly to the economic vehicle. His first task in the wilderness was to blaze a trail for future guidance, and to connect his backwood cabin with the nearest settlement by means of a road. It was a habit implanted by the more level surface of the English-speaking sections of Europe, and by the denser occupation which precluded the use of many animals. The Mormons followed the example with precision. They sought to cover with settlements as much ground as possible, and in founding a village a committee was early detailed to prepare a road to the nearest base for communication. In British Columbia the government wisely availed itself of a host of miners, blocked in their advance by the roughness of the Fraser region, to open a highway into the interior. The Columbia had hitherto served as their roadstead, but the custom-house restriction and trouble imposed by its new owners turned traffic up the Fraser.

Good roads were pronounced a boon of civilization. In new territories the legislatures were lavish with charters, and good toll roads were constructed on every side. Some complained of the charge, particu-

larly when a small outlay for improving odd bits of natural roadway and covering some brooks with a few logs became an apology for a bridge. Ferries sometimes added to the extortion by controlling the exclusive crossing-privilege for several miles on either side. In this manner the movement of poor emigrants was at times checked for lack of means to meet the different road tariffs. Nevertheless the roads proved a blessing.

The picturesque mule-train of the Mexican found its counterpart in the ungainly wagon, the so-called prairie schooner of the American, sometimes of several tons capacity, and conspicuous for its dingy white cover, within which a large family was frequently sheltered. A line of these vehicles, with drivers and escort, presented by no means an unimposing feature on the western prairies. The inhabitants of New Mexico were the first to compare it with their own less unwieldly trains at the opening of the Santa Fé trade. Shortly afterward the continental range was crossed, and in 1849 the tented wheels began to stretch in an almost unbroken line to California, in well-regulated processions, with officers and guards. The successive opening of mining fields in the interior was marked by similar movements, attended by rivalry, from different quarters. Thus Idaho, formerly entered from Oregon, was soon reached by roads direct from California, while the eastern states sent goods up the Missouri to Fort Benton, and along one of the few military roads westward. The traffic with Montana alone, mainly by this route, employed between 2,000 and 3,000 men, and nearly tenfold that number of animals, while Colorado claimed at one time 10,000 freighters, a very turbulent class, ever prepared for an encounter with the savages on the road, and with whiskey at the station.

The stage for passenger conveyance acquired its highest perfection among the Americans, like many other contrivances for the accommodation of the pub-

lic. In some districts sprinkled roads added to the comfort of the elegant coaches. Here, also, monopoly effected combinations to sustain prices, while sometimes giving certain compensatory advantages in return. Lines extending from the Missouri river branched midway, one going to California and another to Oregon.

The development of the express business was particularly striking, one leading company possessing branches throughout the length of the coast. Urgency and high pay stimulated it to efficient service, the official operations of the government being widely surpassed in the carrying of letters. A remarkable branch of service was the pony express, composed of relays of solitary riders, who sped across the continent in face of hostile savages and other dangers. Expressmen must be equally courageous, for highway robbers were numerous. There are frequent instances where a resolute expressman bade defiance to several assailants and saved the property entrusted to his care. In Mexico, the home of footpads and marauders, surrender was the usual procedure of the minority.

More widely sung was the fame of the stage-driver of the mining regions, whose skill with the reins and gallantry toward women have been the theme of many tourists. The guides of the early explorers and immigrant parties live in history, and in the mountains and streams dedicated to their memory.

The supremacy of wagons and steamboats was of short duration, for new territories, owing to the large influx of population attracted by successive gold discoveries, led to the construction of railways, and reduced to tributary position the stage and express, the steamboat and minor craft, while augmenting traffic in general by its greater speed and cheapness. Although Spanish America displayed the least enterprise in progressive measures, the first interoceanic railway was constructed across the isthmus of Panamá,

but by and for the accommodation of the people of the United States.

The spanning in like manner of the broader northern section of the continent was agitated at a still earlier date, but the distance, cost, and obstacles kept back capitalists, even after the government had proposed its aid. Finally the prospective remunerations of the road assumed more attractive colors, under the experimental efforts of the branches within the settled districts, and subscriptions were secured, and in 1869 the greatest of railway feats was accomplished.

The road quickly demonstrated its value to the owners as well as to the public. The exploration for routes contributed a vast fund of information to geologic and other scientific knowledge, besides information which hastened the development and occupation of the great interior. The work of construction served to promote settlement along the line. Wyoming, for instance, was practically built up by the road, which, on the strength of the expected traffic, founded several towns. Cheyenne sprang up so rapidly that it was called the magic city. Railway shops and a branch southward gave solidity to the place, which was sustained by traffic with the mining districts. The same road made it possible to develop coal and iron mines at other points, which gave employment to hundreds of men, the mainstay of several additional towns. Nevada and Utah gained in similar manner, the latter also from the money distributed for wages among the Mormons. A number of branch roads, now alone feasible, lifted to intercourse and prosperity a number of outlying districts.

The disturbance created in manufacturing and certain commercial circles was slight as compared with widespread blessings. Panamá, whose early Spanish transit trade had been revived with the California traffic, saw its prospects clouded by the diversion of passengers and goods to the new channel along the

forty-second parallel. Even half of the exports took this route. As for the imports of the coast, partly turned by the war into a foreign channel, the eastern states regained the ascendancy.

San Francisco lost much interior trade, which formerly passed through her port, but which now was distributed en route. She retained much entrepôt traffic with the coast, however, and secured an enlarged commerce with China, Japan, and Australasia by virtue of the overland line, her central geographic position, rare harbor facilities, and command of rich valley outlets. Her rise upon the sandhills at the gate of the bay, rather than upon the more favored strait of Carquinez, was due greatly to the accident of a well-known name, and to the haste of the fleets to anchor at the first available point.

In the north the hopes of the fur-trading emporium of Vancouver had been shattered by the dangerous bar at the mouth of the Columbia river, which early drove the shipping to Puget sound. The transfer of the territory gave rise to the new British entrepôt of Victoria, with its several advantages of harbors and controlling situation. Portland, Sacramento, and Stockton are sustained mainly by the command of rich valleys. The absence of better ports gives prominence to Vera Cruz, as does the isthmus position to Panamá, and the harbor to San Diego.

The railway has proved a power in creating or lifting towns to importance, particularly in the interior. Several of the county and state capitals owe their existence to railways, as Cheyenne, Modesto, Tacoma. Denver's future was doubtful until her enterprising citizens, by dint of personal efforts and negotiations, assured her as the railway centre of the state. Other illustrations of decadence can be given, where the iron road passed by a once flourishing settlement, whose sole dependence was agriculture or exhausted mines.

The conditions governing the selection of sites vary considerably in Spanish and American countries. In

the former the government has had a voice in such matters, and the proximity of certain natural features regulated development. In the other the predominance of vehicles, the readiness with which natural defects were remedied, as in bringing water, levelling or climbing hills, and the manipulation of interested speculators have had their decisive influence. Paper towns, floated or collapsed, belong to the United States, and are unlike such centres as Guanajuato, Helena, and Nanaimo, which are based on mineral resources; or Salem, San José, and Puebla, founded on agriculture; or Guerneville and Alvarado, dependent on manufacture; or suburbs and resorts, like Oakland, Jalapa, and Santa Cruz. They conform more closely in their selection to the general aspiration for traffic, in being located at heads or outlets of navigation, or swayed by the fickle projection of some road rather than of prospective industry; the application of a suggestive or attractive name contributed not a little to success, as instanced by San Francisco.

The success of the first transcontinental road led to numerous projects for tributaries and for rival lines. The railway through Montana to Washington made its way, despite bankruptcies and delays, relieving the isolation of a vast interior. Two other roads profited by the experiment, and pushed their way through the southern sections, with branches dipping into Mexico. In the matter of alternate sections of land which in new and unsettled regions were usually donated by the government, a lesson might be learned from Colorado, which arranged with the grantees to so improve their tracts as to benefit the state lands, and raise their sale value.

British Columbia took advantage of its geographic position as a new highway to the orient, and of British fear and jealousy of the United States, to obtain from Canada and England the construction of a transcontinental line in advance of requirements. It seeks,

however, to atone for its haste by bidding at low rates for the trade of the southern countries, to be carried by this circuitous route in and out of the United States.

The effect of the competition has been to divert still more of the trade once passing through California to intermediate points and termini in the south and north. San Diego receives cargoes direct from abroad as the entrepôt for a region fast filling up with people, and Victoria is striving to secure a portion of the oriental and Australian transit trade for the Atlantic shores. The prospective completion of an interoceanic canal, with cheaper water carriage and saving in the handling of goods, must interfere with transhipments, and force the railways to rely more upon their regular business, and consequently to direct more of their efforts to local development.

In common with general development in other directions throughout western North America, it is doubtful if ever again the world will see such progress as has been made in the laying out of roads, the construction and equipment of railroads, and the improvement in sailing vessels and steamships during the last half-century. True, much remains to be done, but not so much as formerly, nor in latitudes so favorable. The facilities for migration and transportation which we to-day enjoy were not so much as deemed possible of accomplishment a generation ago.

In this part of the biographical section of my historical series is presented a more full and thorough account of the rise and progress of all that relates to the subject of transportation, the routes and methods of travel, and the results thereof in the way of town-building and the transformation of the wilderness, together with the attendant telegraph, mail, and express facilities, than has ever before been published. The information comes mainly from original

sources—largely from the individuals themselves who have performed these gigantic tasks.

And as railways and railway traffic have come to the front in the transportation business, have indeed risen in volume and importance superior to all other kinds of business, it is most appropriate in the selection of biographies and portraits for the embellishment of such a work to choose those most conspicuous in railway circles, as we are certain thereby to secure for our instruction and profit the lives of those most conspicuous in business circles of whatever kind or distinction.

Among the writings of antiquity, we find no more brilliant conceptions, whether of men or gods, no vaster achievements, whether on earth or in heaven, than the work accomplished in our very midst by those who have spanned the continent with their lines of travel, laid iron tracks over plains and through mountains, and on them placed rolling palaces of comfort and pleasure, for the furtherance of commerce and the better intercommunication of the race. No effort is more sublime, no accomplishment more humanizing, no result more civilizing, than this bringing of the earth's ends together, and the making of one language and one people all the nations of the world. Those in whose minds originate such ideas, and in whose hands they are executed, are the true embodiments of progress, the true civilizers of mankind. Throw, even now, round nations, great and small, the ancient walls of feudalism, barring human intercourse and the interchange of ideas, and straightway we relapse into a new dark age.

Nor can this vast and important subject be better begun than by placing at the title-page of this volume the portrait of Collis P. Huntington, and giving his biography here. The subsequent parts of the work will be illuminated by the lives of others conspicuous in like or kindred undertakings.

CHAPTER II.

LIFE OF COLLIS P. HUNTINGTON.

INFLUENCE OF RAILROADS ON GENERAL DEVELOPMENT—MEN WHO AGGRANDIZE—EARLY ENVIRONMENT—THE BUILDING OF A STRONG MAN—SETTING OUT IN LIFE—HABITS AND PRINCIPLES—SUCCESS AS A MERCHANT—MARRIAGE—REMOVAL TO CALIFORNIA—ISTHMUS EXPERIENCES—BUSINESS AT SACRAMENTO—EVOLUTION OF THE GREAT RAILWAY IDEA—NECESSITY OF AN OVERLAND RAILROAD—CONSTRUCTION—FINANCES—CONSUMMATE SKILL IN THE FACTORSHIP AND MANAGEMENT.

AMONG the phenomena of the universe the strength of the strong man most of all commands attention. For in the possession of this faculty exists all; in its exercise lives and moves all, material and immaterial. Herein all men and things, natural or supernatural, are nearest akin. Nature is charming; it is a most interesting study to penetrate her secrets and watch the display of dynamic influences. The author of nature is far from us, and we understand so little; but man is our brother, and his strength our strength. The ever-widening dominion of man over nature, the ever-increasing subordination of the material to the mental, is god-like, or more than god-like; for there is no spiritual force, as yet appearing, which can in any degree retard human progress. The march of mind more than keeps pace with the evolution of all other entities.

The great men of the present age are greater than the great men of antiquity; for the reason that it is more difficult to build up than to tear down. It is more difficult to lay a track for a steam-engine over the Sierra Nevada than to cross the Alps on horseback

—more difficult to construct that engine than in the olden time to stir up the pride and passions of the people to wars and butcheries, resulting in great so-called glory.

The industrial, and consequent social, development of the Pacific coast, during a comparatively few years is more striking and important than has ever taken place in any other country during an equal period of time. Among the agencies which have contributed to this development, particularly in its later and better aspects, that of transportation has been the most potent and far-reaching in its operations and influence. Unquestionably, also, the chief agency in the department of transportation has been railroads. I apprehend that the correctness of these three propositions will be admitted without argument.

By way of further introduction to this biography a fourth proposition may not be out of order, for the soundness of which the facts, as they fall incidentally into the record, must be allowed to speak for themselves. It is this: That in railroad affairs on the Pacific coast Collis Potter Huntington has been among the foremost of creating and controlling spirits, and has contributed to this phase of Pacific coast development talent of the rarest order. If this be true—and there is not the remotest doubt of it, notwithstanding any popular fancy that may exist to the contrary—what follows? This, that his has been among the greatest individual forces contributed to the material and social growth of western North America; that in this building up of empire, under conditions new and strange, he has been conspicuous among the great factors associated with him.

Still he does not come into this history solely on account of his identification with railroad work on the Pacific slope, though this is the central idea of the study, for, apart from transportation, his individuality was otherwise felt and recognized in California and the east.

His influence has been that of the practical man of business. He began his career in this wide realm of complex activities doing whatever his hands found to do, and doing it with a will, almost at an age when most boys are still in the nursery. Thenceforward a law unto himself, as though offering by his inborn powers an instance of natural selection for a great work, he has worked out his destiny with a certain fulness and perfection of development. But the conventional man of letters may demand upon what ground historical importance is claimed for such a character. If an apology be demanded for an endeavor to look into and perpetuate the life-work and spirit of such an agent in human affairs as this question implies, I have but to ask if it be a thing worthy of the approbation of mankind, whose enlightenment and progress depend more than all else upon garnering up the lessons of experience, to seize and save a vital record of these Pacific States during the last forty or fifty years, for of this striking epoch he is a conspicuous exponent. Men of war, scientists, philosophers, explorers, poets, rulers, and princes have as a rule monopolized the attention of their fellows. I deal with men who, though uncrowned and untitled, are kings in the actual sense of that word—sovereigns by peaceful conquest, creators of dominion, industrial and intellectual. I look more to the substance of things than to the form. It rather stimulates than daunts me to realize that the actualities of life which I would present through a study of the chief personages of the drama have been slighted by the generality of those upon whom we depend for the chronicles of the human race. It has ever been that he whose deeds stir the emotions or startle the sensibilities is apt to engross the public mind. But is this all the food that literature has to feed upon? Do even the philosopher, the mathematician, the orator, and the poet contribute all to the enlargement of men's minds and the improvement of

society? Is not intellectuality, of whatever form, an essential in belles-lettres? Is the genius of commerce to be eschewed? By what energy have nations risen; by a misapplication or waste of what energy have nations fallen?

If commerce may be considered as the superstructure of community life, so may inter-communication be termed its foundation. It is more potent than all the missionaries and all the schools. This is a practical truth and will be accepted as such by all those who do not pay arbitrary tribute to conventionality or precedent. What, then, may we not fairly assume regarding the calibre and quality of men who have engendered, broadened, and controlled, in its various intricate and perplexing forms, the commerce of a vast community? I deal exclusively with those who actually augment, who, in working out the problem of individual life, expand the resources and contribute in large measure to the wealth and happiness of the country of which they are a part. If among men there be a more substantial, a more useful, or a more commendable agency than this, an agency requiring stronger intelligence or better character, I confess my inability to perceive it. In what the intellect required for success in business differs from that which succeeds in science or art is, at best, speculative. I am convinced that the consummate man of business possesses capabilities that would have won eminence for him in letters had his talent been developed in that direction; in fact, men of business have won laurels in literature while distinguished scholars have proved themselves excellent men of affairs. But whatever else may be said, there is no question that the former are the bone and sinew of every land and that in the United States they dominate in the affairs of the nation, not only through the channels of trade, but personally in the legislatures of the states and the general government. For the most part they

are not only the body, but the mind of our institutions. These stalwart men, educated in the broadest sense, their abilities developed by friction and their minds expanded by observation, which an eminent writer has defined as genius itself, possess a wisdom which Bacon declares is outside of books and above them. Type of this class, exemplifying American aristocracy of character, may be found in Mr Huntington. In my thoughts of him and other New Englanders, who have either made or revitalized their family names in a new country, it has sometimes seemed to me a special act in the economy of providence that there should be reserved such a nursery as New England—a necessitous region of inhospitable climate, in which the struggle of life begins almost at the cradle—in which to rear men of iron frame, keen wit, indomitable spirit, and uncompromising loyalty to morals and good government, who should go out in their strength to settle and build up civilization in the wildernesses and waste places of the far west. The distinction and virtue of such service to mankind should be crystallized and perpetuated in the name of the pioneer. In our society and government a man's name of itself alone gives him no title to consideration. This is as it should be; but true worth everywhere gives vitality to the name of its possessor. As an expression of the man his name becomes, by virtue of his career, a living power. A good name fairly earned should not be, and is not, less prized in America than in Europe; for pride of character, which is inseparable from pride of name, is universal, natural, and manly. Such a name is a sacred inheritance; there is no other heirloom half so precious. To the extent that it is appreciated for its moral force it is a tonic. Wendell Phillips, who was one of the fairest exponents of republican spirit, charges us to garner up the experiences of our ancestry. "I can conceive of nothing more unfortunate," said he, "than a lack of desire to understand the early founding of

our societies or to explore the sources of individual power, which are the sum of national greatness." There is a text for many admirable practical sermons in a single name, about which cluster the associations of a long, active and valuable life—a name which is the index to character. Especially is this true if eminence has been attained by means of self-help, which is at the root of all genuine growth in the individual and which, exhibited in the lives of men, constitutes the true source of national vigor and strength. It manifests unmistakably what it is in the power of each to accomplish for himself, enabling men of even the humblest beginnings to work out for themselves a rank and position commensurate with their talent and industry.

The life of every man is as the well-spring of a stream, and it is a solemn thought that this influence, which has had a beginning, will never have an end. There is indeed an essence of immortality in the life of every man even in this world. No man's acts die utterly; and though his body may resolve into dust and air, his good or his bad deeds will still be bringing forth fruit after their kind and influencing future generations for all time to come. It is therefore the supreme duty of the historian and biographer thoroughly to comprehend and analyze the indestructible human force which he studies, in order that he may, as far as possible, preserve it in its individuality, in its organic entirety, so that here among men its beneficent influence may be enjoyed now and forever. "The life of the lowest mortal," says Carlyle, "if faithfully recorded, would be interesting to the highest, then how much more interesting when the mortal in question is already distinguished in fortune and natural quality so that his thinkings and doings are not significant of himself only, but of large masses of mankind." "How inexpressibly comfortable is it to know," he says, "our fellow-creature, to see into him, understand his goings forth, decipher

the whole heart of his mystery; nay, not only to see into him, but out of him; to view the world altogether as he views it, so that we can theoretically construe him and almost practically personate him."

Deep in the green midlands of Connecticut, inaccessible by any means of communication more modern than the old wagon-road of primitive days, slumbers, as it slumbered a hundred years ago, the little hamlet of Harwinton. Here C. P. Huntington was born October 22, 1821.

Huntington is an old name which is said to have reached England with the Normans in the eleventh century, and among the noted men of this stock in America was Samuel Huntington, who was one of the signers of the declaration of independence, president of the continental congress, and chief-justice of Connecticut. Ebenezer Huntington was a lieutenant-colonel in the revolutionary war, and in 1799, when the French war threatened, was, on the recommendation of Washington, appointed brigadier-general. To the same stock belong the right reverend Frederick D. Huntington, bishop of New York, and Daniel Huntington, the distinguished painter, president of the national academy of design. The Huntington family first emigrated to America early in the seventeenth century.

Experienced educators have declared that while intellectual brilliancy and scholarly attainment are possible in a single generation, long sustained mental activity and constantly augmenting mental power are legacies which may be inherited only by the descendants of an educated ancestry. Thus it has been found that while individual specimens of barbarous or semi-barbarous races, may manifest aptitudes for learning, they invariably fail in continuous mental effort. When the long sustained activity of Mr Huntington is considered, even were a knowledge of his progenitors less definite, the appli-

cation of this test would indicate for him descent from an educated and intellectual ancestry.

Mr Huntington's father, William Huntington, was a man of large frame, standing six feet two inches in his stockings. A man of severe character, his puritanism expressed itself in an austere virtue based upon radical convictions of right and wrong. Strikingly original and independent in his views, and cherishing exact ideas of justice, he did not give himself up to the religous conventionalities and dogma that dominated New England in his day. He went to church only occasionally; and even this compliance with the prevalent custom was due almost wholly to the deference he always manifested for his wife, who was a devout presbyterian, for he himself had no leaning to any sect. At the same time he was thoroughly versed in scripture. He had the bible at his tongue's end, and delighted in controversies touching scripture; so keen was his mind and so ingenious was he in argument that few could stand up against him. He was radical in his opinions on whatever subject, and if he was severe, he was so conscientiously. His ideas of training his children were rigid and practical, and in these days would be considered hard and narrow; still it is a régime to which we owe some of the strongest men of our country. He did not believe in wasting time with them, as he called it, holding that if a boy had anything in him and had been taught to read, write, and cipher, he would make his own way in the world.

His wife's ambition was that her children should grow up to be moral, religious and useful members of society. Her influence over them was through sympathy and affection. In her sphere she did her whole duty. She was a woman of exalted character, and had her responsibilities been greater and her opportunities commensurate, doubtless she would have manifested adequate capabilities. Her larger life, in some respects, may be looked for more

properly in her son, whose field of labor afforded him the opportunity of fully developing the good traits which he inherited from her. The virtues thus transmitted to and confirmed in him by her loving example have probably been more instrumental than all other moral agencies combined in forming his character and governing his acts. The mother is so often repeated in her children. Acts of affection, counsel, patience, self-control which they daily exemplify, live when all else that may have been learned has long been forgotten.

As showing the astuteness as well as the self-confidence of the elder Huntington, it may be noted that among the sage maxims through which he expressed his knowledge of men and business was this: "Do not be afraid to do business with a rascal —only watch him; but avoid a fool, for you can never make anything out of him." There was much more of expediency or common-sense in his composition than reverence for form or rule; hence he did not go much beyond his own judgment or conscience to determine the propriety of his own acts. Altogether he was a marked personage of singular and powerful individuality.

From this parentage the boy Collis derived the blood and iron that made up so large a part of his constitutional outfit, though from his mother's gentle nature he inherited a group of softer tendencies that were destined later in life to blossom and expand into practical benefactions which will make him long remembered as the friend of the oppressed and unfortunate.

From the father, who, besides, had unusual mechanical ingenuity, he inherited also that fondness and genius for barter which made the son distinguished as a merchant no less than as a railroad financier.

From early childhood the boy Collis led a busy life. He was the fifth of nine children, and industry was the motto of the household. His native town

was a hard-working community. Labor was the criterion of respectability. Children who were too young to bring in wood brought in chips. Mr Huntington, speaking of those early days, has said that he could not recollect the time when he was not doing something useful. It is a tradition in the neighborhood that when only eight years old he yoked up a pair of oxen and brought in a load of wood from a hill close by. Another story told of him when he had attained his ninth year, is that, being employed by a neighbor to pile up in a woodshed a quantity of wood, he did it neatly, and then with that liking for good work which has since distinguished his railroad constructions, he picked up all the chips in the wood-yard and put them into barrels. His employer was so well pleased that when he gave him his dollar—the first that the boy had ever earned—he patted him on the head and said: "You have done this so well, I shall be glad to have you pile up my wood again next fall." It may be truly said of him, as Hugh Miller said of the mason with whom he served his apprenticeship: "He put his conscience into every stone he laid." He who told the story as being within his own remembrance added, and "Collis was much delighted with the praise and with the dollar, but he said to me with a bright laugh: 'You don't suppose I am going to pile wood for a living the rest of my life, do you?'"

During his boyhood he attended school for four months in the year and worked the rest of the time. There was much taught that he took no interest in learning. Mathematics, geography, and history he liked and studied, but he did not give much time to anything he did not like. There is little doubt that he knew more of history and geography than any other pupil in school. There were many older than he. When reading history, which had for him all the charm of fiction, he always kept a map at hand, making topography and locality the basis of his study,

in order to comprehend precisely the migrations of the race, the lines of commerce, and the relative positions of contending armies in the field. He delighted in analyzing the motives that influenced the great military leaders in their strategic movements. His taste for this phase of study, which he still retains, induced him to follow the campaigns of the war between the states with great interest, and made him strikingly familiar with the character of the conspicuous men and events of that period. Ancient history he knew well, and he became most closely familiar with the physical features of the earth, its outlines, capes, headlands and rivers, and, having a very impressionable and retentive memory for locality, he even now recollects anything in the topography of a country or region that he has ever examined, and that with marvellous clearness and particularity. In answering a friend's question Mr Huntington said: "I once drove a pair of horses from New York to Vicksburg, and to this day I can almost map out that country as I saw it then, with its hills and valleys, villages and rivers. Yes, I naturally attribute something of my success in railroad building to the interest I take in such things." As his journeyings during the last fifty years have led him into nearly every part of the United States, it is safe to say that there is not a man living whose topographical knowledge of the country is so comprehensive and precise as his.

Always enjoying the perfection of health, and possessing the physique of a young Hercules, there was no boy in school, old or young, who was a match for him in a tussle. But it is stated to his credit that the gift was not abused. The milder traits inherited from his mother impelled him habitually to protect the weak. So abundant was his physical strength that his first impulse in seeing a wrong done was to right it by force. But this proclivity belonged to his youth only. In his later life self-control became a

distinguishing feature in his character, and his influence over men has been due entirely to the exercise of intellectual and moral suasion. No one deprecates more than he any recourse to brutish strength, believing it possible to control men always by the influence of mind over mind. His peculiar power over all those about him, amounting, in some instances, to a cheerfully recognized sovereignty, has been due mainly to his control of himself, coupled with the force of a subtle and commanding intellect.

The conservative nature of the New England community in which he passed his boyhood helped toward this conformation of his character, while his inborn powers soon made him conscious of his superiority, and rendered it fairly easy for him to mature into the practical philosopher. As he grew up he cared but little for association with other boys. He preferred often to wander off alone—to think out schemes of life for himself. This is the first indication he gave of that self-reliance and independence of both thought and action which years afterward expressed itself in combinations of startling boldness and extraordinary magnitude. To some persons, therefore, he may have seemed to be a speculative man. Not so; his speculations have been really careful calculation, based upon the immutable laws of trade, and carried out in accordance with the argument of probability.

As a boy, he was full of mischief, though never vicious. Fond of adventures that required caution, presence of mind, and ready wit, he never let such chances go by, and yet he was seldom caught napping.

When he was fourteen years of age his school life ended, and his father consented that he should be his own master on condition that he should thenceforth support himself. It was the custom in New England at that time for boys to serve their parents until they were of age. That year Collis worked for a neighbor for seven dollars a month and board.

He saved all he earned—eighty-four dollars. When a friend remarked to him: "Why, that's all the money you received for the whole year's work!" "Exactly," he replied, "that's the reason I didn't save any more."

His introduction to the world of trade and commerce was in the country store of Phineas W. Noble—and thus at a plastic age he began to serve his apprenticeship in the rigorous commercial atmosphere of a village store, which was a world of commerce in miniature. It encompassed all the essential elements of trade, and comprised within its range of business activity the ultimate and fundamental principles which, when once mastered, need only be expanded to fit the broader theater of the world's exchange. What the deck, the masts, and broad expanse of ocean were to the self-helpful and assimilating mind of Midshipman Nelson, himself starting at the bottom and finally earning the world's recognition by force of his unaided genius, that country store was to the young merchant.

The next year, with a stout heart and $175 in his pocket, he left his birthplace and turned his face towards the great metropolis.

As he was bidding his mother good-bye she drew him to her bosom, and in her sweet way blessed him with these words of practical and holy counsel: "Collis, you are going away now, probably forever. My dear child, remember that your future will be largely as you make it. Do anything you have a mind to do, but never ask anybody's opinion of what is right or wrong; for should you do so, I know it will be because you want an excuse to do something that your own conscience does not quite approve of."

Did mother ever express greater confidence in her son? Was there ever a more eloquent good-bye? Was ever counsel more discreet? Her words sank deep into his mind, and he never forgot them. As yet he had never tasted liquor, and, in fact, until he was nearly forty years of age the taste of intoxicants was

unknown to him, and all his life he never smoked or used tobacco. Speaking of the former habit he has often said later in life: "I have seen so much of the evils resulting from the use of intoxicants that I consider it the wisest policy to keep them out of the sight of young men, and I believe that society has the right to protect itself by a legal suppression of the traffic. This has always seemed to me a simple question of self-preservation."

He started for New York a youth splendidly equipped for the battle of life—quick-witted, self-reliant, and courageous. He had the muscles of a young giant, and a power of endurance that can be acquired as well by constant and laborious exertion in the open fields of New England as anywhere else, or by any other means, in the wide world. He was ready to take the work that lay nearest to him, and anxious to do it better than anybody else could do it. This has been his ambition, or as he would, perhaps, prefer to say, his policy, all through his life. The poorest part of his outfit was the $175 that he had in his pockets, though the manner in which he earned and saved this nucleus of his future millions reveals the man in the boy. In the college of life, department of economy, by denying himself immediate gratification for the sake of future benefits, by placing reason above appetite, he becomes master, not of the arts, but of himself, which is the highest mastery of all.

In New York young Huntington at once put to a practical use some letters of recommendation that he had received from home. Mr Noble of Harwinton was a well-known customer of certain firms in the city which supplied his store with stock. The old gentleman had taken a great liking for the boy, and helped him with his credit. Looking around for merchandise that he thought he could sell to advantage, he finally hit upon watch-findings, and presenting his letters, received credit for what was to him a large stock of

goods to begin with, amounting in all to about $3,000. In disposing of these goods he worked with such vigor, ingenuity, and persistency that at the age of sixteen he had reason to feel quite satisfied with his gains. The next that his friends knew of him he was in the south, where he took what he describes as "a large number of clock-notes" for collection. These notes he had purchased at a heavy discount from a man who had employed a hundred salesmen to dispose of his clocks in the southern states. In this undertaking he displayed more conspicuously than ever that confidence in himself to do things which are difficult and discouraging to others—a confidence, however, that was reasonable, being strictly in accord with his ability to accomplish. He was very successful in his collections, and the work of turning his notes into money proved an admirable exercise for his faculty of negotiation, while his extensive travelling made him very familiar with the southern country. In fact, he became in a short time better acquainted with the United States generally than, perhaps any other person of his age in America. He mastered thoroughly the geographical relations of trade between the different parts of the nation, and it was thus that his attention was so early called to the general subject of transportation in its relation to commerce. Besides, also, he was introduced to many phases of character and to a variety of transactions that were new to him, and which being learned practically enlarged his views of men and things. Especially did it bring him into contact with commerce and exchange at a point suggestive of the functions of transportation in the distribution and consumption of the commodities that pertain to human need and luxury.

His wanderings through the south were full of incident and were keenly enjoyed, as he was thrown among people different from those with whom his earlier life had been passed. Fond of the study of

human nature he embraced the opportunity thus presented and profited by it in more ways than one.

Mr Huntington tells many capital stories about his wandering life in the interval between his departure from Connecticut and his twenty-first year. No one could better appreciate the picturesque characters that he encountered in the various states where his business of collecting notes directed him. He was too cheerful and of a nature too happy not to extract sunshine from his surroundings, and too philosophic to waste his energies in missionary labor. His feelings and his judgment were decidedly against slavery. He could not find in his heart or mind any apology for such an institution. In his soul he was grieved to see human beings in bondage. Yet he knew that the negroes in the south, taken as a whole, were in better condition than they had ever been anywhere else. His sympathies went out to them, however, because by instinct as well as by education he cherished individual liberty as a natural and inalienable right, and because he believed the black man could be made a good and useful citizen. His good-will and discriminating charity to them he has amply proved by his acts. Toward the white people of the south he felt no ill-will. He saw that the maintenance of slavery, while it was the basis of refinement and a high sense of personal dignity and honor among the slave-holding aristocracy, tended to demoralization from a lack of incentive to general industry, and consequent idleness and apathy. As between the two he thought slavery a greater curse to the white man than to the negro.

When Huntington reached his twenty-first year he found himself possessed of considerable means, considering his age and the times. He had travelled extensively in the states east of the Mississippi; he was familiar with every county in almost every state, and had a fund of interesting and valuable recollections of personal experiences in many of them; but he now

felt like settling down to steady business and steady profits. He went into merchandising with his brother Solon, at Oneonta, Otsego county, New York. It was a solid establishment, and its business rapidly increased, until it grew to be among the most prosperous in the county. The old farmers of that section were keen at a bargain, and perhaps not quite so scrupulous with regard to their word as they were in respect to their profits, but one member of the firm at least was quite competent to cope with them. A born diplomat, his tact never failed him. On one occasion he went to New York city to dispose of a large stock of butter. His competition with, and final triumph over, the principal dealer in that staple, who brought his shrewdest tactics to bear to crowd him out, would make a good story of itself; suffice it to say that when Huntington got ready to withdraw, it was with his antagonist's respect and with large profits.

In September 1844, Mr Huntington married Elizabeth S. Stoddard, of Litchfield county, Connecticut, a most charming woman of sterling character, of one of the oldest and best families of New England, with whom he lived very happily.

During the years spent in Oneonta the young merchant never frequented the saloons or hotels, but passed his evenings at home. The domestic ties have ever been to him the sweetest. The magnificent physique with which nature had endowed him he took great care of. His great muscular powers gave him the undisputed distinction of being "the best man in the county." He could take a barrel of flour by the chimes and lay it on his shoulder, and every year he sawed and piled up for his own consumption twenty cords of four-foot hard wood, working before breakfast. This exercise brought all the muscles of his body into play, and was better than practice in a gymnasium. Years afterward, when he had attained to a commanding position in the world of financiering, he was accustomed to speak of this habit of regular and hard exercise as one of the

best tonics for the system. When some persons sought his financial assistance in establishing a certain college gymnasium, his reply reflected the influence of the severe school in which his life had been spent. "Tell your young men," said he, "that I will buy enough timber land for them to erect a gymnasium on, and put up the gymnasium myself, on condition that they will cut off all the timber, saw it and split it and pile it up. In this way they can make enough money to pay for a good part of the work, and besides get some good hard exercise such as you say they need, and a good deal better than they can get in a gymnasium." At last accounts he had received no notice of the acceptance of his proposition.

One of the secrets of Mr Huntington's success as the best business man in Oneonta was his excellent judgment of the character of men. He trusted people whom his neighbors would not trust, rarely suing a customer, and generally allowing his debtors to be their own collectors. He adhered then, as in later life, to the maxim, "Trust all in all or not at all," and he found that in the long run it paid, for during the fifty years and more in merchandising he lost less than any of his acquaintances in business. He believes in the observation that a man will fill the niche that you put him in. If you make him feel that you depend upon him, and trust him, he will not disappoint you. If he perceives that you lack confidence in him, your mistrust is apt to be the standard that he will live up to. So stimulating is the approbation of our neighbors that the rogue will strive to live honestly if he is sure of it, while the honorable man has often fallen short of his duty for lack of appreciation.

It was inevitable that the small field for business offered by this interior country town should sooner or later become inadequate and distasteful to a man of Mr Huntington's abilities and spirit, and when, in 1848, the eyes of the whole country were turned feverishly in the direction of California, he made up

his mind that he would judge for himself as to the prospects of that country. In October of that year the firm made a shipment of goods around Cape Horn to California, where the rush of gold-seekers was creating a sudden demand for all sorts of commodities. Huntington went forward by the way of Panamá. He was but slightly affected by the California fever, but he argued that if there was a great deal of money in circulation and a lively market for goods, he would be willing to take his chances of getting a share of the golden shower. How matters stood, he would find out by investigation. He was neither overcredulous nor excited.

When it became known that Huntington was really going to California, many of his townsmen showed the respect they had for his leadership and judgment by going directly to him to induce him to organize and take charge of companies, but he declined, telling them frankly that he preferred to go alone and unhampered. Five delegates from the Delaware district came to tell him that, if he would organize a company, twenty-five or thirty would go from their section, but Huntington turned a deaf ear to all solicitations, and on the 15th of March 1849 he sailed for the Isthmus on the steamer *Crescent City*.

The narrative of a voyage to California via the Isthmus in those early days has an interest far beyond that of the present. Mr Huntington must often think, as he now whirls over the vast fields of his youthful travels in his own comfortable car, surrounded by his family and friends, of the vexatious episodes of that first long and tiresome journey, when it took him five months, instead of five days, to reach the Golden Gate. Thousands made the voyage under all sorts of conditions, and their story is comprehended in the history of the crowd, but Mr Huntington's experience was unique. Hundreds of anxious immigrants, landing on the Isthmus, stampeded across, having their baggage transported by *burros*, or

whatever other means were possible, they themselves going over afoot under the scorching tropical sun. At Panamá multitudes arriving from all parts of the world awaited transportation to the gold-fields. Thrown together in a small foreign city, a promiscuous company of adventurers, far from home and the restraints of society, many fell to drinking and gambling. Weakened by dissipation and the enervating influences of the climate, many succumbed to disease.

Among these painful histories the experience of Mr Huntington affords a wholesome lesson. On the trip he had made an agreeable impression among his fellow-passengers, as a man who had thoughts of his own which he could put into practice. There had been great trouble in procuring boats to ascend the Chagres river, as high as $30 being paid for a single passage, and a committee of three was appointed to go ashore and contract for boats to take about a thousand passengers up the river. Huntington was selected as one of them. Before accepting the appointment, however, he said: "Gentlemen, it is all well enough to go ashore, but I know that as soon as we land everybody will try to hire his own boat. Now I don't want to go on a fool's errand. I propose to contract for boats for as many as are willing to pay ten dollars apiece, and for no others."

The force of his proposition was seen and accepted, and nearly everyone paid his ten dollars into the fund. The committee, on which Hastings of Detroit and a man named George R. Parbert served with Huntington, went ashore and made a contract with the native boatmen to take each passenger and his baggage to Gorgona for $7. This was in United States currency, which was then worth about 27 per cent. more than the Spanish money. Parbert and Hastings went up the river in about the first boat to Gorgona, and engaged horses and mules for transportation, taking the money to be paid out at the end of the route. Huntington remained behind three days

and finally followed in the last boat. Half-way up to Gorgona he was met by some of the returning boatmen, who, on recognizing him, became furious, exclaiming, "*Mucho malos Americanos!*" and demanded back the money out of which they claimed to have been defrauded. Parbert, it appeared, had bought the money of the country on his arrival at Gorgona, left the Spanish currency in the hands of another person to pay for the boats, and had himself gone to Panamá, pocketing the difference of exchange. Pacifying the swindled boatman as well as he could, Huntington wasted no time in reaching Panamá, and with intense irritation confronted Parbert, whom, with scant ceremony, he compelled to give back to every passenger his proportion of the money withheld.

Before Huntington secured passage from Panamá three months had elapsed, and some eight thousand Americans had collected there, many of whom fell ill. Numerous organized companies arrived, with captains and lieutenants, but the members generally quarreled among themselves when they reached the Isthmus. Many came to Huntington to sell out, and he bought their outfits wherever he could see a chance for a trade. His energy and vitality were such that he walked across the Isthmus, twenty-four miles, twenty times, starting early in the morning, making about half the distance before the heat became intolerable, and the remainder during the latter part of the afternoon and night. While on the Isthmus, hearing of a little schooner that was offered for sale at Astabula, he went on foot to see her. With Carmichael, from Montgomery county, New York, he went up the Bogotá river, and walked some 39 miles under an equatorial sun. Arrived there he purchased the vessel and had her loaded with supplies. Carmichael meantime had been attacked with brain fever, and was delirious during the five days' passage back to Panamá. Huntington nursed him all

the way down, but the poor fellow died shortly after they reached Panamá. Many others, and in fact a large proportion of the delayed passengers, fell victims to tropical fever, while Huntington actually gained ten pounds in weight, because, as he said, he always kept himself too busy to be sick. His experience, in contrast with that of others, shows the value of having and working constantly toward a well-defined object. It is a tonic for mind and body.

At last Huntington, with about four hundred others, took passage for San Francisco in the sailing-ship *Humboldt*. He had left New York with $1,200. During his detention on the Isthmus he added nearly $4,000 to that sum. Mr. Huntington's reminiscences of his trip on the *Humboldt* are interesting. It was a strange experience to the young merchant. Of the crowd on the ship there were many restless, nervous, eager men, who, as a rule, had not had any business experience east, and who had been unsuccessful there.

By avoiding every needless expense and observing strict economy, coupled with his genius as a trader in San Francisco, where he remained only a few days, he had increased his capital by the time he reached Sacramento to $5,000, and all expenses paid, while many others arrived there impecunious, or, in the less elegant parlance of '49, "dead broke." He had made substantial progress towards fortune, and had given unmistakable evidence of his ability to succeed before he reached his destination.

His first study was the commercial geography of the country. The entire business activity was in the mines. The first great mining enterprises had the region now comprising the counties of El Dorado, Yuba and Placer for their field of operation. Mr Huntington, already a student of transportation as a factor in business, saw at a glance that Sacramento was the best point from which to supply the interior market with goods. The distribution from that point

would be with teams. The country merchants, coming from the mountains to the Sacramento river to obtain supplies, could not afford to leave their teams at that point and come down to the seaboard to purchase goods. To do so involved the expense of sending the goods up by steamer. They could not avail themselves of the cheaper transportation by schooners, because the time of arrival was uncertain, and because by that method too long a period would be required. A merchant establishing himself at Sacramento could avail himself of the cheap transportation offered by the sail-vessels, but the small trader, keeping his store of miners' supplies for the immediate use of miners in the mountains, could not await that slow method of transportation. The rate by steamer was more than three times that by sailing-vessel. The commercial advantage of using the slow craft of the river, which a merchant doing business in Sacramento could afford as against the more costly and more expeditious method of steamer navigation, then the only resort of the small trader, was at once perceived by Mr Huntington, and influenced his decision in favor of Sacramento as the base of his proposed mercantile enterprises.

But in order to get as comprehensive a view of the resources of the country as possible he made a trip to the mines. A brief investigation confirmed him in his first opinion and, also, thoroughly satisfied him that the life of a miner would not be either congenial or advantageous to himself.

Very many pleasant incidents are even to this day related by the old residents of Sacramento, illustrative of the peculiar tact and the restless activity of Mr Huntington to forecast and take advantage of commercial contingencies, which soon placed him in a commanding position among business men, and which, later, distinguished the house which he founded, that of Huntington and Hopkins.

He went forward from the very beginning, discov-

ering and developing bonanza after bonanza, where others either slept upon or had not the faculty to perceive and grasp the opportunities about them. While great fortunes were being made and lost in uncertain mining ventures, his investments, based upon the principle of the ebb and flow of trade, upon the law that the pendulum having swung to its limit on one side must rise pretty nearly to the same hight on the other, were in every instance successful.

In the early days of California, in the absence of railroad and telegraph communication, speculative shipments were frequently made, causing extraordinary variations in the prices of staple articles. His sagacity enabled him, in many instances, to take advantage of these fluctuations with startling strategy and magnificent profits. For instance, when shovels, an indispensable article in mining, were a drug in the market, he would buy up, on their arrival, all that were offered, and as storage was very scarce and dear, others hesitated to follow his example. With the recurrence of the demand, his would be found the only source of supply, and himself absolute master of the situation; in other words, he was a persistent and active buyer of shovels when nobody else wanted them, and the only seller when everybody else wanted them. By eternal watchfulness and careful study of the market, he always had on hand a sufficient stock of potatoes to meet all requirements at remunerative profits; while others, taking the current of trade at the wrong time, found themselves, as a rule, either overstocked or understocked. When cargoes of potatoes began to come in from remote islands of the sea, he stepped out of the trade for the time; those who were not warned went on buying and suffered. In the purchase and sale of powder in large quantities, shiploads of hard bread, and almost every other necessary commodity, all varying extremely in price, as well as small articles for which he could create a value by handling, his foresight and adroitness, joined with carefulness and hard work, were scarcely less

than marvellous. In 1854 his net gains would have been considered a fortune.

Yet, in the midst of these large transactions, there is a lesson to be learned from his punctilious regard for business principles as regards details. "Watch the small economies," was the motto of his life. Says he: "I have always looked after the little things of my business; weightier matters will take care of themselves. I told one of my clerks in Sacramento to pick up a four-penny nail that had been lying on the floor for some time, remarking to him, "The time taken by you to pick it up is worth more than the nail, perhaps, but if you don't save the four-penny nail, pretty soon you will attach no value to the six-penny; next the eight-penny will be swept out, the ten-penny will follow it, and finally you will not care for spikes."

Mr Huntington divided his time, in the earlier days, between his principal business house in Sacramento and his three trading-posts at Weaver creek, Martheness creek, and Mud springs. He frequently traveled by night, as well as by day, back and forth over the intervening country, which was beset with the dangers peculiar to a new and comparatively lawless mining community.

He was seemingly unconscious of the risks he incurred, especially as at times he carried large sums of gold about his person. The consciousness of his own great strength, coupled with characteristic discretion, relieved his mind of every fear. In one case of emergency he walked fifty-four miles in one night, carrying with him forty-five pounds of gold dust.

Before passing to the formation of the historic house, the good name and wide scope of which are still familiar to the Pacific coast under the present title of the Huntington Hopkins company, a feature of Mr Huntington's early life on this coast may be noted, as showing him to have been not only a wise business manager, but also a true friend

of young men. Sacramento in 1850 numbered 12,000 souls, a population made up almost entirely of high-spirited adventurers and sanguine men from twenty to thirty years of age. There were only two families in the place, that of William H. Watson and Dr Birdsall. Home life was unknown. On many of the most important corners was a gilded palace of infamy. Gambling and drinking were almost universal. There was no evening resort in which these body and soul destroying vices, and those evils which they lead to, did not constitute the sole recreation or pastime. Few pioneers withstood altogether the allurements of dissipation that environed them. The young man who possessed the moral strength to resist the temptations that beset him on every hand was an anomaly as rare as was the presence of a pure woman. Cut off from almost every restraining influence many plunged into a delirium of speculation which ignored to-morrow, staking all upon the issue of to-day. Sacramento, like the rest of California at that date, presented a spectacle of headlong abandonment and dissipation, her total recovery from which, even by this time, would not be possible but for the marvellous vitality and recuperative energy of Americanism. Such were the conditions of Mr Huntington's introduction into California life. It is an attestation of the solid and rational moral principles upon which he fashioned his behavior that he walked through this atmosphere unharmed by the contagion with which it was poisoned. And the moral law that was wholesome for him in his New England training, he applied rigidly but kindly to all his business household. It was a part of his contract with every one of his employés that they should remain in the store from supper time until breakfast. In the upper story they were provided with the most comfortable lodgings, and the meals served for them and himself at the same table in these quarters were superior to any that the restaurants of Sacramento could furnish.

His household were supplied bountifully with food for the mind also, for he deemed it a good investment to provide a first-rate general library and a number of newspapers, with which his clerks might while away the evenings profitably in company with himself. For years his store was probably the only one in Sacramento that remained closed on Sundays. This rule he always observed, not less because he deemed it a measure of health and good policy, than because he retained a sacred regard for the observance of the day. The effects of this wise régime, by which a cheerful home was provided for many young men in his large establishment, in a community of general homeleness, can be better imagined than described. Suffice it to say, briefly, that a number of the most worthy business men and citizens of California who were schooled to usefulness and integrity under his roof, acknowledge a profound obligation to their discriminating and practical benefactor. That he prospered marvellously is not to be wondered at. He commanded success, and he was entitled to it. His course led up legitimately to the point of founding a commercial house which became a prominent factor in the greatest feat of commercial and social development of its kind that the world had ever known.

As the result of his ceaseless and well-directed effort we have the great hardware house at 54 K street, and later the still larger establishment in San Francisco. Next door to him Mark Hopkins kept a store. In this way the two men became well acquainted, and formed a lasting attachment for each other.

Mr Hopkins had formerly been in business in Lockport, New York. He and E. H. Miller, Jr, the present secretary of the Central Pacific railroad company, formed a partnership at an early date at Sacramento. The firm of Hopkins and Miller was dissolved by the retirement of the former from business in 1853, when he returned east, but drifted back again to Cali-

fornia. Hopkins then said that the only thing that would ever induce him to go into active business again would be a partnership with Huntington; and as this was agreeable to both, the firm of Huntington and Hopkins was formed in May 1854, and the two friends remained associated in business for twenty-four years, until the death of Mr Hopkins.

There were never two men better fitted for each other. They were friends in the truest and deepest sense, and it is pleasant to hear Mr Huntington speak of this long partnership.

"During this period," he says, "we did a business amounting to hundreds of millions of dollars in hardware, railroad building, and various other enterprises, but not an unkind word, so far as I remember, ever passed between us. Mark Hopkins was one of the truest and best men that ever lived. He had a keen analytical mind; was thoroughly accurate, and took general supervision of the books, contracts, etc. He was strictly the office man, and never bought or sold anything. I always felt when I was in the east that our business in his hands was entirely safe. I recollect when our articles of copartnership were drawn up and signed by us, each took a copy and placed it in his private safe, and there these copies remained unexamined and unread by either of us during our entire association. I have never seen mine. I believe it is in the old safe in Sacramento yet."

Mark Hopkins told an acquaintance that they had never owned a dollar of stock in a mine, never sent out a drummer to get business, and had never sued a man for debt. Notwithstanding the flush times, a very large percentage of the business done by the house of which Mr Huntington was the head, was on credit. The fact is recorded, and one which speaks highly for the commercial integrity of early Californians, that the minimum of its book accounts were lost; that while mining enterprises were character-

ized by great vicissitudes of fortune, sooner or later these accounts were nearly all collected. This experience, however, was not common to all business houses, but was rather an evidence of superior judgment and care.

The population of California had been drawn about equally from the free and slave sections of the nation. It was a commingling of elements, therefore, directly and irrepressibly antagonistic. The first issue which confronted the suddenly acquired population of California, was whether the state to be formed should be free or slave. The influence of early associations in the establishment of canons of thought was in this case thoroughly exemplified. Young men from the north, who, when at home, were perhaps in a measure apologists for slavery, at once took position in favor of the institutions in which they had been educated; and likewise, young men from the south, who when at home entertained many doubts as to the justification for the peculiar institution of their native states, were as readily classified by early associations and home sympathies with the institutions of the south. Mr Huntington, by instinct a lover of freedom, espoused the free state side of the controversy with characteristic energy and enthusiasm.

Edward Baker, the leading champion of the free state cause at that time, found in the firm of Huntington, Hopkins, and company a reliable source of financial supplies. To the leading men of the free state party Mr Huntington was bound by the strongest ties that bind men in a common cause. He was mainly instrumental in the establishing, maintaining and shaping the policy of the first out-and-out republican newspaper in the state, *The Times*, James McClatchie, editor, and published from the quarters gratuitously furnished him in the upper story of 52 K street, Sacramento.

In the first campaign after the admission of the

state, the general party alignment taking form in consonance with party divisions in the eastern states was whig and democrat, the latter party being, however, as much under the domination of southern sentiment as the former. There was scarcely a perceptible difference between the professed principles of the two parties. But the free soil movement in the eastern states found an echo in California, and the irrepressible conflict of the time was slowly but surely engendering those forces which were eventually to relegate the whig party into oblivion, and give birth to the great national republican party.

A stand was erected on which speeches were to be made in advocacy of the formation of this party, committed to the doctrine of resisting the extension of slavery, and by logical sequence to the doctrine of its eventual overthrow. The time for the meeting was appointed ; but the crowd which the occasion called round the platform was so antagonistic that it was overturned, and the small crowd of sympathizers routed. The attempt to hold a republican or anti-slavery meeting was on each occasion frustrated. A like meeting, appointed at Folsom, however, was attended with better success. Mr Huntington had rallied a contingent of supporters, and the right of free speech was vindicated through his vigorous leadership. The southern whigs were less pronounced in favor of the perpetuation of slavery than democrats from the same section. Some of the most brilliant supporters of the slavery cause, however, were southern whigs, but the issue of slavery and anti-slavery was generally made between northern and southern men. These matters are referred to here chiefly because they constitute the genesis of an intimacy between C. P. Huntington, Mark Hopkins, E. B. Crocker, Charles Crocker, and Leland Stanford, which culminated in the enterprise with which these names are inseparably associated.

By the period of 1855 the agricultural capabilities of California began to be recognized. The American

occupation of the territory had continued long enough to make the peculiarities of the climate partially understood. It had begun to be perceived that the period of verdure in the broad valleys and fertile hills west of the central axis of the Sierra Nevada was longer than a like period in the northern, middle, and western states. The great diversity of horticulture, so favored by the clemency of the climate, had begun to be seriously considered, though no one then dreamed of its capability as understood to-day. The settlement, which up to the time of the recognition of the natural resources of the country had been regarded as nomadic, began to lose its ephemeral character, and the American population turned its attention seriously to the great question of laying the foundation of a civil and social fabric.

Perceiving that the discovery of gold and the resultant hegira from the eastern states was soon to become a mere incident in the settlement of a country possessed of really great natural resources, the thoughts of far-seeing men were turned to the question of establishing cheap and expeditious communication with the main body of civilization of our country.

In the minds of a few great spirits the practicability of building a railroad across the continent began to take precedence of all other subjects. To whom the honor of first proposing a plan of a railroad from the Mississippi river to the Pacific ocean belongs is hardly known reliably. It has been recently claimed by Mr Smalley, in his history of the Northern Pacific railroad, that as early as 1834 Dr Samuel Bancroft, of Granville, Massachusetts, advocated the construction of a railroad from New York to the mouth of the Columbia river by direct appropriations from the treasury of the United States. In 1836 John Plumb, a Welshman by birth and civil engineer by profession, called the first public meeting at Dubuque, Iowa, for the purpose of agitating the sub-

ject of building a transcontinental railway, and in 1837 Dr Hartley Carver published in the New York *Courier and Enquirer* an article advocating such a construction. But the first person to formulate a practicable scheme to bring the project into public notice was Asa Whitney, who, between the years 1844 and 1850, agitated it in addresses to legislatures and public meetings, his proposition being to construct a railroad which should begin at Prairie du Chien, on the Mississippi river, cross the Rocky mountains at South pass, and have its principal terminus on the Columbia at Vancouver, with a branch from some convenient point west of the mountains to San Francisco, his principal object being to make the route of Asiatic commerce to Europe through the United States.

In these later days, when travellers accustomed to luxuries at home can almost duplicate those comforts while crossing the continent in magnificent vestibule trains in five days' time, it is interesting to look back and note in what light the possibility of such an accomplishment was regarded by the practical men and political leaders of thirty years ago. The subject was discussed freely in the session of 1842-3, but while some declared their belief in the practicability of the scheme others derided it, and among them Senator McDuffie, who opposed the project and ridiculed the idea that steam could ever be employed to facilitate communication across the continent. In the fall of 1849 the Pacific Railway convention at St. Louis, presided over by Stephen A. Douglas, condemned Whitney's project. Senator Benton, of Missouri, earnestly advocated, however, for many years a transcontinental railroad, but it was not until the gold excitement brought to California a large influx of population from the Atlantic and Western states that the matter was brought up so prominently before the government that its discussions resulted in positive action. In 1851 Senator Gwin gave notice

in the senate of a bill for the construction of a Pacific railroad, and in 1852 Senator Douglas reported a bill on the same subject. On May 1, 1852, the legislature of California passed an act granting the right of way to the United States for railroad purposes, and in March 1853 congress made its first appropriation, $150,000, to defray the expense of the necessary surveys, and the same year parties were organized and sent out by the war department. In 1854 congress made two more appropriations, of $40,000 and $150,000 respectively, and three more parties were sent out. Both the republican and democratic conventions adopted resolutions in their platforms of 1856, pledging the parties to aid in appropriate legislation on this subject. Prior to 1860 the legislatures of eighteen states had passed resolutions in aid of a Pacific railroad.

The subject continued to grow in importance in the minds of the nation's legislators, and other influences were at work to make it a measure not only of advantage but of necessity. The first gun was fired on Sumter, followed soon by the battle of Bull Run. California might well have been forgotten then, but the attention of the country was called to its distant possession through the arrest on the high seas of Mason and Slidell, who were on their way to England and France as the accredited representatives of the confederate government; for immediately afterward the harbor at Victoria, Vancouver Island, was occupied by the Asiatic fleet of Great Britain, and the fleets of Russia made their appearance at San Francisco. It was then that the leaders of the nation awoke to the startling fact that the United States government was powerless to hold its golden possessions on the Pacific coast in the event of a collision with any great foreign power, to say nothing of the danger of civil commotion because of the lack of facilities to throw troops and supplies into California on short notice. Meanwhile the shipments of gold

from California, though sorely needed to maintain the national credit, had steadily fallen off, much of it being diverted to England, on account of the risk of transportation caused by confederate cruisers and the insurance rates went as high as fifteen per cent to cover war risks.

The exciting debates in the senate during these eventful years all evidence the temper of the nation and its realization of the urgent necessity of establishing a transcontinental railroad. In 1862 the war, navy, interior, and postal departments were paying for transportation across the continent more than $7,000,000 per annum.

Meanwhile in the far west, while the agitation of the subject of a transcontinental railway had been less general, perhaps, the desire for the accomplishment of such a result had been growing more and more intense as the din of war grew louder. News reached the coast slowly and unsatisfactorily. California seemed in these times of profound excitement almost out of the world, so that the conception of a transcontinental line was looked forward to with a feeling hardly less than ecstasy. The huge and bold project developed in the minds of a few powerful natures there into actual plans and calculations. It is certain that Mr Huntington, as soon as he reached the west coast in 1849, perceived the tremendous advantages that would accrue from a railroad connecting California with the east. The project grew more and more feasible and attractive to him as the years went on and the discussions on the subject began to take root in the enterprising minds about him.

From 1850 to 1860 the population of the far western states and territories had increased from a mere handful to more than a half million persons, and in the whole area of 2,000 miles from the Mississippi to the Pacific ocean there had been built only 232 miles of telegraph and 32 miles of railway. Mr Huntington, accustomed all his life to dealing in the things that

people must have, saw clearly the benefits that would accrue to the people of the United States when easy and quick communication should be established with the Pacific coast, since it would make the United States an exporter of food and bring under cultivation such portions of the magnificent country west of the Missouri river as were suitable for agricultural and grazing purposes. It has been said that the patriotism of the present day is a tame sentiment compared with that which actuated the citizens of the republic thirty years ago—a mistaken idea, which arises from the fact that the necessity for its expression does not exist in such degree in times of profound peace as in times of threatening and danger; but in those days Mr Huntington, while mindful of the personal emoluments that might and ought to result from an achievement of such magnitude as the Central Pacific railroad, entertained a feeling of patriotic pride in its success, and was willing to take the great risks involved. In the agitation on this great subject that ensued in California the southern men naturally favored a southern line, while the northern men insisted upon a northern line. There had been for years a lively dispute as to where the road should run, but it was a dispute that up to 1860 resulted in nothing. Huntington and Hopkins were now a wealthy firm, perhaps the strongest in California. They had not only accumulated what were fortunes for those days, but their credit was unimpeachable, and their business brought them into contact with men from all parts of the state, and made their names and standing well known in the east. They had become absorbed in the problem of how to get a road across the Sierra Nevada.

Theodore D. Judah was an engineer who was so enthusiastic on this subject that he was called Pacific railroad crazy. One day he startled the people of Sacramento by announcing without qualification that he had found a long and easy ascent of the mountains

by way of Dutch flat which was practicable for a railroad. He wanted subscriptions to enable him to make a reconnoissance, and finally called meetings for the purpose; but in the midst of his work, after many had promised aid, there came the presidential election of 1860, and with it more and more startling rumors of war. People stopped giving, and in the presence of the more absorbing topic lost for the time all interest in the project. In 1861 Judah went to Sacramento and again began his agitation on the subject. A meeting of the citizens at the St. Charles hotel followed, and at this discussion Huntington was present, but a listener only. Judah assured the meeting that he had made many reconnoissances over the mountains and had found all the lines rough, but would like to make a thorough survey. Subscriptions were tendered of small sums of money, barrels of flour, and sacks of potatoes. Huntington subscribed nothing. Several approached him and said, "Look here, Huntington, you are the man to give to this enterprise." He had already donated something to a wagon road and an overland telegraph; but he had little faith in Judah's methods. He did not believe that a transcontinental road could be constructed by contributions to a picnic, or a charity entertainment. As he left the meeting he quietly drew Judah aside and remarked to him, "If you want to come to my office some evening I will talk with you about this railroad." Judah called the following evening, and the matter was fully discussed, with the result that Huntington agreed to secure six men who would pledge themselves to pay the expense of a thorough instrumental survey across the mountains and to furnish him the money to make it, which Judah then estimated would cost about $35,000; but Huntington distinctly told him that he would agree to nothing further, only when the work was done he would look ahead and see what there was in the enterprise. This meeting between financier and engineer may be termed in a sense the origin of the Pacific railroad.

Many a night after that Huntington and Hopkins sat up long past midnight, in their rendezvous over 52 K street, discussing the outlook. Hopkins was very much in doubt whether the gigantic difficulties presented by the Sierra Nevada could be overcome, but Huntington was in a mood to try it. He saw and talked with Leland Stanford, who agreed to join the enterprise, and pay one seventh of the whole expense of a survey. Judah also came into the agreement, as well as L. A. Booth, Charles Marsh, and James Bailey, and at last these seven men bound themselves to do the initial work.

Early in 1861, as the result of carefully perfected plans long discussed, the Central Pacific railroad company of California was organized under a general law of the state, with a nominal capital of $8,000,000, to construct a railroad from Sacramento to the eastern boundary of the state of California, and the five men who organized it were Huntington, Stanford, Mark Hopkins, Charles Crocker, and James Bailey, E. B. Crocker coming in later, Mr Booth having retired.

The surveying party decided at last upon the Dutch Flat or Donner Lake route, which contemplated an ascent of more than 7,000 feet in less than 100 miles, although the difficulties staring them in the face were appalling. Judah had made what Huntington called a superficial estimate. He had got too much earthwork in the first place, and not enough rock. Huntington went over his figures and made such changes in the classifications as his judgment dictated. The accuracy of his figures was borne out in the final cost of the work.

Congress was now in session, and Huntington and Judah started for Washington, armed with maps and charts, to render what assistance they could to the friends of the measure in congress, which at its session of 1861-2 was agitating the subject.

"The idea of a Pacific railroad," said Mr Huntington, in narrating the story to a friend some years ago,

"originated when I was a boy, but the projectors of the Central Pacific did not at first fully entertain such a gigantic undertaking. They did not know definitely where they would build to, but expected that their road would be a part of the transcontinental line. To those who had considered such an enterprise the Rocky mountains had seemed to offer no serious obstacles, but the Sierra Nevada had always been a formidable barrier in their way. I felt that, if they were once crossed, our road would then become the nucleus of a Pacific system. I used to say to my immediate associates, 'Don't let us talk about a Pacific road. Let us always keep in control what we build, and pursue such a conservative policy as will not bring us into financial difficulties or harm our credit. We will build continuously until we meet a road coming from the east, even if we have to build to the Missouri river, but let us go slowly, so as to be sure that we shall own what we build.' And had I then known as well as I do now the character of the country east of the Sierra Nevada, I would have arranged from the start to build to the Missouri river. The desire for a transcontinental railway was general. Everybody on the west coast wanted better facilities for returning to visit their homes in the east. The water line was objectionable to a great many. In April 1851, I went to California with my wife and sister, paying $1,500 for three tickets, and ten years later a single fare was $250. Accommodations were indeed poor, compared with those of the present time, and there was the danger of delay and sickness.

"Senator Benton and other prominent men were strong advocates of a railroad to the Pacific coast, in order to bring California closer to the eastern states. The depredations and loss of life by Indians, while the emigrants who traversed the 2,000 miles of plains in wagons, was a serious consideration. Between the Missouri and Sacramento rivers, a distance of 1,800 miles, there was not a single navigable stream, and a

vast portion of this territory was unknown and uninhabited except by savages."

While in Washington looking after the Pacific railroad bill, Mr Huntington carried a weighty responsibility. From his associates, who had dared to undertake with him the huge enterprise, he bore a power of attorney to do for them anything whatever —made him their plenipotentiary to buy, sell, bargain, convey, borrow, or lend without any condition except that they should share with him in everything. A more momentous trust was perhaps never confided to a single man. With what fertility of resource, resolution, and persistence he showed their faith in him well grounded is now recorded in history.

The result of his work on the threshold of the undertaking, in the national legislature, due largely to his personal efforts among the controlling minds at Washington, is summed up in the act of congress of 1862 and 1864. By this act the Central Pacific railroad company entered into a contract with the government to construct a railroad and telegraph line from the Pacific coast at or near San Francisco or the navigable waters of the Sacramento river to the eastern boundary of California, having the right to build eastward until it met the Union Pacific, the Union Pacific having the right to build westward until it met the Central Pacific. In aid of such construction the United States agreed to donate every alternate section of public land, designated by odd numbers to the amount of five alternate sections per mile on each side of the road, the title to said land to be vested in the company when it should have completed forty consecutive miles of railroad and telegraph, and on completion of said section the secretary of the treasury should issue to the company bonds of the United States, payable thirty years after date, bearing six per cent interest to the amount of the bonds per mile; but from the western base of the Sierra Nevada the bonds to be issued should be $48,000 per mile for 150 miles east-

wardly, and between the mountainous sections at the rate of $32,000 per mile, the company to complete fifty miles of said railroad and telegraph line within two years of filing their consent to the provisions of the act, and fifty miles each year thereafter; the entire line between the Missouri river and the Sacramento river to be completed so as to form a continuous line of railroad, and ready for use by July 1, 1876.

The act provided that the issue of bonds and delivery to the company should *ipso facto* constitute a first mortgage on the whole line, its equipment and property of every description. The grants of lands and bonds were made upon condition that the company should keep its line in repair and use, and at all times transmit despatches, transport troops, mails, and munitions of war, supplies and public stores for the government whenever required to do so by any department; and that the government should at all times have the preference in the use of the road at fair and reasonable rates, not to exceed the amount paid by private parties for the same kind of service, and compensation for such services should be applied to the payment of the bonds and interest until the whole amount should be fully paid; and after the completion of the railroad, until both bonds and interest were paid, at least five per cent of the net earnings of the road should be applied annually in the payment thereof; but there was an implied understanding between the two parties to the agreement which is very clearly shown in the debates of congress during this period, and in the undercurrent of popular opinion regarding this enterprise. This understanding was, that, except for the five per cent of net earnings to be paid annually after the completion of the road, the government would look only to the performance of that portion of the contract by which the railroad company undertook to do its telegraph business, and transport its mails, troops, and munitions of war and public stores, for the repayment of the principal

and interest of the bonds. As a matter of fact, from an examination of these debates, it would seem evident that not a single vote was cast for the act of 1862 with any expectation that the government would receive from the railroad companies in reimbursement one dollar in addition to the five per cent and the services rendered in transportation. This becomes an important consideration in view of the stand which Mr Huntington took in later years, when the incalculable risks and difficulties connected with the construction of the Central Pacific railroad, and the magnificent services performed by the daring actors in this stupendous achievement, had been apparently forgotten by the nation's legislators, who, ignoring the spirit of the contract, demanded its literal fulfilment.

In 1860 Samuel R. Curtis, then chairman of the Pacific railroad committee in the house of representatives, reported that the aggregate amount which was paid by the government for the transportation of mails and military and naval stores from the Mississippi river to the Pacific ocean reached more than $7,000,000 a year, and in the very year of the passage of the act, 1862, Mr Campbell of Pennsylvania, then chairman of the house committee, reported that the amounts which the war, navy, Indian, and postal departments were paying for transportation across the continent aggregated more than $7,300,000 annually, which computed at six per cent would represent a capital of $125,000,000. Henry Wilson, senator from Massachusetts, said he would be willing to donate that sum, supported the railroad bill, and asked whether the company would guarantee to build the road if the government would grant it $100,000,000 outright! While urging the passage of the bill Mr Huntington gathered statistics to show the cost to the government of policing the country so as to protect the emigrants, and also care for the Indians, on the line of the proposed road. This expense was $16,000,000 during the year that General Johnson

was at Salt Lake. He showed that Wells, Fargo, and company were paid $1,750,000 per year for carrying mails; that Ben Holliday received large amounts, and that Russell and company had one contract amounting to more than $7,000,000 for transporting supplies to Salt Lake City. He made the point that after the road had been built the country would be settled rapidly, but that under existing conditions it would long remain a wilderness. Troops could be transported in seven days by rail, while Lewis and Clarke were more than a year in reaching the Pacific ocean. This was an important consideration after the civil war had commenced, and doubt was felt in regard to the stand that California would take. He showed, further, that if the road were built through the aid of a loan, and the government paid interest on the amount, the reduction of its military expenses would more than offset the interest. Mr Huntington made it clear to members of congress how taxable property would be developed, how settlers would come in, and how easily the Indian problem would be solved, and tragedies of the plains made a thing of the past. A consummation devoutly to be wished, for in the years 1864 and 1865 the quartermaster's department spent over $28,000,000 for military service against the Indians, these two being a portion of the thirty-seven years in which Indian wars cost the nation twenty thousand lives and more than $750,000,000.

The cost of the Mormon war in Utah was frequently alluded to in the debates preceding the act of 1862 and that of 1864, and while the records of the war department do not disclose any tabulated statement giving the amount actually paid out, it was estimated in army circles, soon after the termination of the campaign, that the entire expense to the government was not much less than $30,000,000, more than the entire amount of bonds loaned to the Central Pacific. Certainly this expedition made the fortunes of the Mormons, who sold for the use of the troops

their spare agricultural products at enormous prices, and acquired the outfit of the expedition with only a small outlay, a financial result which induced Brigham Young to say that he had made war successfully on the United States. It is needless to say that, without the building of the Pacific railroads, the control of the Mormons would have been as costly as the subjugation of the Indians.

The famous bill of 1862 finally became a law; and while its passage, with all defects and inadequacies, which were foreseen by none so clearly as by Huntington himself, was a triumph for him and his associates, he was not unduly elated. It was unlike him to exult over what was a mere beginning, however propitious, or yet to commemorate with pomp and ceremony the complete success of an undertaking. The accomplishment of a great end was of itself a sufficient gratification.

Thoroughly progressive in his ideas, he found but slight pleasure in looking back. Things done might be good enough, but in his policy the greatest value of an achievement was the point of departure it affords for new work. He saw no more importance in throwing up the first shovelful of earth or in driving the last spike than in throwing up any other shovelful of dirt or in driving any other spike during the progress of the work. His despatch to the other members of the Sacramento syndicate is characteristic, "We have drawn the elephant: now let us see if we can harness him up."

With the attainment of the first great result sought by Huntington, the passage of the act, his labors at Washington being for a time at an end, he hastened to New York to take up the still more difficult part of his work, that is, to inspire confidence in others so as to get them to assist in the great work. His preliminary fight had been to overcome opposition to needed legislation; now the struggle was to overcome the inertia of doubting capitalists.

Under the act forty miles of the road were required to be completed and accepted by the government before the guaranteed aid could be secured. Hence money had to be obtained from some other source before contracts for material could be entered into. The moneyed men of New York, many of whom regarded the scheme as visionary, were not disposed to aid the work until some parts of it were in operation. Stock subscriptions came in with painful slowness. Huntington had faith larger than a grain of mustard-seed. But he could not move the mountain this way. With all his honesty of purpose, as the time passed on, with all his rare ability in finance and negotiation, with all his persistency and eloquence, he could find no support for the enterprise in the skeptical minds of the money kings. There was never a time, however, when he was at a loss for an expedient. He boldly announced that he would not surrender a dollar of the company's bonds for anything but cash; also, that he would pay cash for all materials that he might purchase. In order to support himself in his position, he made himself and his four associates, Leland Stanford, Mark Hopkins, Charles Crocker, and E. B. Crocker, personally responsible for the whole amount, whatever it might be, knowing that they had the power to make it good. In other words, they deliberately pledged their private fortunes to the construction of the road. On this basis they went to work, from the beginning always keeping within their ability to meet every obligations. And he is known to have said that he would not sell his securities unless he got a sound price for them, for only by so doing could he make them good. At no time was their pay-roll thirty days in arrears.

Huntington's first negotiation of bonds was with Boston parties. Flint, of Flint, Peabody, and company, an old shipping firm there, came to Huntington in San Francisco, and proposed, on the ground of his reputation as a negotiator, to help him in selling a

million and a half of the bonds. Huntington had understood that Flint was connected in some way with a sale of bonds on Wilson's road at Marysville, California, which really was not worth anything, and hesitated; but being assured by Flint that he was not mixed up in that matter, Huntington told him if he would sell the million and a half he would give him $20,000. After that Huntington would every now and then spend a day in Boston, to learn how matters were progressing, but nothing seemed to be done. Flint said things were working very nicely, but it took time. It took so much time that it finally wore out Mr Huntington's patience. He began to investigate on his own account, and found that Flint had been connected with the negotiation of the bonds of the road from Folsom to Marysville, was consequently not in good standing, and could accomplish nothing.

It was galling to him to learn this, and he went to Flint straightway. "Mr Flint," said he, "we have been backing and filling long enough. You say you know all the capitalists, but you haven't sold anything. I was to give you $20,000 if we succeeded in selling the bonds. Now you have not the influence you claim to have, and I want you to release me, because you can't fulfil the agreement on your part."

"Oh! I couldn't do that," said the polite Mr Flint. "You will if you are an honest man," said Huntington, sharply. "You can't help me any, and I am going to sell those bonds." "You can't sell them now," Flint interjected. "Come, I'll tell you what I'll do," replied Huntington. "I'll give you twenty of the bonds, and you shall not offer them to anybody until I have negotiated the rest. As you are not able to help me I'll dispose of them myself." Flint readily agreed to this, but still insisted that the bonds could not be sold at that time. "Give me a hundred out of your safe!" said Huntington, and taking them in his hand he marched out.

"I was just mad enough to be interesting," he continued, in telling the story, "and in less than an hour I returned with all the bonds I had taken out at par and interest."

On another occasion Huntington went to Lombard, Ames, and others, wishing to interest them in his bonds, offered them one half at 85 and the remainder at 1.15. After many consultations, they told him they had made up their minds that they could give but 60 cents. Huntington was mad, as he describes it, "although," he adds, "I wasn't quite as mad as I appeared to be. I only said: 'Now, gentlemen, you have kept me dancing attendance nearly four weeks. I told you my price, and you said you thought we could deal, and now you offer me 60 cents. I tell you, gentlemen, you can't afford to buy them at that price, as they cannot be made good with the money they will bring. Give me my price and I will give you as good a security as the government's. Give me your price and you have not made a good purchase.' I got madder and madder as I kept on talking, and said something perhaps I ought not to have said to let them know how long they would have to wait before I would come to their terms. Oakes Ames said: 'Huntington, give us a little time to talk it over.' I said: 'I'll give you a whole year if you want it!' Well, they came back in twenty minutes and took half of the million and a half, and later some of them paid as high as 1.42½, so that the whole loan averaged considerably over par.

Mr Huntington felt that he was right upon principle, apart from the mere satisfaction of disposing of his bonds. He has ever been consistent in holding bonds on new roads at high prices, knowing that in this class of work it is almost impossible to make a sound security that is sold at an unsound price. He has been known to say: "I never like to offer a bond at $25,000 when I know it is going to take $40,000 in bonds to complete the road," as no party

would be willing to advance $15,000 a mile to complete a road when there was $25,000 per mile ahead of such advance. It must be admitted that in such cases his judgment has proved to be not only correct, but the wisest possible course financially for the owners of the road and those investing in its securities. He never regarded the technical completion of a railroad as the actual end of the task, for he knew by experience the endless disasters that may befall a new road-bed, and call for continual and often immense expenditures in reconstruction or renewal.

Mr Huntington's views on this matter are well known in railroad circles. On the occasion of a dinner, at which a number of railroad men were present, Andrew Carnegie relates that one of the guests was congratulating himself on a road he had just completed, when he, Carnegie, rose and said: "A new road is the devil."—*Huntington.*

Huntington's labors were not confined to raising money in the east. The responsibility devolved upon him alone of expending immense sums in the purchase of rails, locomotives, and all other materials for the new road. Some idea of the tremendous outlay which was involved in the construction of the Central Pacific may be gathered from a few statistics concerning the ultimate cost of these supplies.

This company labored under great disadvantages, which were not shared by the Union Pacific. The work was separated by two oceans and 18,000 miles from the manufactures and the place of their use, over the route they had to take by the way of Cape Horn. Owing to the delays and dangers of the sea, it could not predict within months, if at all, when the materials for its construction would arrive from the east. On account of the great distance around the Cape some supplies were sent across the Isthmus; and being at such a distance from its base of supplies, it was compelled to keep material for nearly a year's construction constantly in transit. It had upon the

ocean, for the greater part of the time it was engaged in the construction of its road, materials valued at from one to three millions of dollars, against which a high rate of interest was running. As the company was confined to the use of American rails, the prices rose during the course of its construction 100 per cent.

The circumstances of one of his notable purchases of material are as follows: Dr Durant having sent out a printed circular calling for 60,000 tons of rails to be delivered in six months for the Union Pacific, the iron-makers met in New York and discussed the situation, with a view of taking advantage of the demand to advance prices. They estimated that the Union Pacific would want 60,000 tons, the Central the same, the Kansas Pacific 40,000, the Sioux City 10,000, and the Central Branch 10,000, 180,000 tons in all. Now was their opportunity. This was outside of the regular demand, while the combined capacity of all the American mills was only 250,000 tons a year.

Mr Davis, a middleman, controlling the largest quantity of rails, asked Huntington how many tons he would require during the year. Huntington saw what was in the wind, and replied promptly: "Don't talk to me, Davis; for I am mad. I have rails on the way to California to lay 150 miles, but my people write me they cannot lay more than 100 miles this year; but they can, and I believe they will, lay the 150 miles." Davis replied that Durant of the Union Pacific intended to lay 60,000 tons, but Huntington only laughed as he answered: "You know he will do nothing of the kind. The Kansas people are in litigation. They won't want a rail. Sioux City won't start to build until Governor Blair has extended his Cedar Rapid road far enough out to transport the material for the Sioux City branch. The Central Branch is not organized, and there will be nothing done on that this year." Subsequent events proved that all he said was true.

Davis went back to the iron-makers, and it was decided not to advance the price of rails. But some few days after, Mr Huntington called for prices from the different rolling-mills, each for about such an amount as he thought they would bid upon, and as soon as he had heard from all the parties he telegraphed to each, and so in one day bought sixty thousand tons. In this and in other instances of Huntington's strategy he used against his competitors the weapons of his wit. It was a species of warfare, in the emergencies of which the success or failure of the great enterprise which he carried upon his shoulders depended largely upon his ability to cope with the adversary on the latter's own ground, and mainly in accordance with his own methods. That Huntington gained supremacy was due to his superior resources and originality. Had they with whom he struggled been more ingenious or astute, he must have succumbed, and perhaps the great railroad project with him. It was a case of the survival of the fittest, and natural conditions determined the character of the fight. It should therefore be judged rather according to the exigencies of trade than the principles of abstract ethics. Such a discussion, however, involves what has always been, and always will be, a vexed question, with necessity or expediency on the one hand, and the requirements of theory or speculation on the other.

As these rails would require a large number of ships for transportation, the next question was how to secure the vessels at satisfactory rates, and Huntington's business shrewdness was again brought to bear His tactics can only be outlined. The details must be imagined. It would not do to let it be known that such a quantity of freight was to go forward. He called on his ship-broker, and said to him: "I want a good ship, one that will be steady and safe. Go out and see what you can find." He went out, and returned with three or four, and named the rates for each, but Huntington shook his head. "It is too

high," said he; "ships are coming in all along, and I am not in a hurry." The broker went out again, and presently returned with a much larger list, some of which were on their way to Liverpool then. He went out the third time, and came back with twenty-three. Huntington quietly noted down the vessels while talking, and suddenly said: "I'll take them." "Take them! Take what?" said the bewildered agent. "I will take all those ships," was the reply. "Oh! I can't let you have them all," expostulated his broker, almost in a fit of consternation; "it is impossible. I thought you wanted one; I must have two or three of them myself." "Not of these," said Huntington, with a quiet assurance that was invincible; "I have engaged them myself." And he got them without further parley.

The vessels took out to California some 45,000 tons of rails, and the ship-broker afterward said that had the ship-owners known what Huntington intended, the ships would have cost the company at least $10 a ton more—a clear gain of $450,000 for Huntington's company.

In the mean while how had affairs been prospering in the extreme west? The city of San Francisco had been empowered by an act of the legislature to subscribe for $600,000 of the company's stock, and to issue its bonds for that amount in payment. The city of Sacramento had been authorized to subscribe for $300,000 of stock, and the county of Placer for $250,000 of stock.

The legislature of California had enacted that it would pay the interest on $1,500,000 of the bonds issued by the Central Pacific for the period of twenty years. No aid was granted by Nevada.

On the 8th of Januray, 1863, the company commenced the construction of its road at Sacramento. At this time its directors, besides Mr Huntington, vice-president, were Leland Stanford, president; Mark Hopkins, treasurer; Charles Crocker, second

vice-president; James Bailey, Theodore D. Judah, L. A. Booth, D. W. Strong, and Charles Marsh. Between Sacramento and Newcastle there were nine contractors. Charles Crocker was one of them. When Huntington's work for the time was done in the east, and he came back to California, he did not find affairs in a satisfactory condition. Each of the original associates was to pay one-seventh of the expense, as government aid under the act of 1862 would not be forthcoming until forty miles had been completed; but now one of them refused to pay. Money was then exceedingly tight, and gold was worth a very heavy premium. Besides, the Sierra Nevada, instead of growing smaller in the eyes of the timid associate, had loomed up higher and higher in the exact ratio of the assessments called for. He had been looking at them through the big end of the telescope so long that the reversion of the instrument overwhelmed him. Huntington pleaded with him not to withdraw for his own sake, although mentally disgusted with his lack of courage. He even offered on behalf of Huntington and Hopkins to lend him money on the security which he had, and made the same proposition to Judah, who was also half-hearted, but Judah and Bailey both declined. Thereupon Huntington lost his patience, and bluntly told them both that there were just four alternatives, and one of them would have to be chosen, as he and the others had made up their minds that the company, as a company, was not going to borrow money for work in California until they had built to Newcastle; that each man should pay his share of the construction until that point was reached, when the company would have an income and a basis for credit. "Either you have to pay in your assessment with the rest, or sell out your interest, or buy men out, or the work stops." They were ready to accept none of these propositions, and the next morning Huntington took measures to bring the matter to an issue. Taking a span of horses he drove

out to see the nine contractors of the road, who were under an agreement that work could be stopped at any time and payment made for what had been done. As he reached each one of them he ordered him to stop work, and by nine o'clock at night he had completed his round and returned to Sacramento. He had stirred a hornet's nest. The first man that arrived in town reported what had been done, and great excitement followed. Efforts were made to buy out Huntington and Hopkins, who in fact granted two weeks' time for the purchase. Bailey and Judah went to San Francisco, and two or three days later telegraphed back that they had found parties that would take their interest. But when Charles McLaughlin, the principal man among the parties referred to, learned who was offering to sell, he said: "If Huntington is going to sell out, I am not going in. Just what sends him out will keep me out." McLaughlin subsequently confirmed this report to Huntington personally. In the light of subsequent history it is a fortunate thing that the negotiations fell through, as Huntington suspected they would.

On their return to Sacramento Bailey and Judah received back the money they had paid in, and withdrew.

During that first year, 1863, twenty miles of road were completed, and the company continued slowly building, using their own private credit to do so, until thirty-one miles had been finished, and Newcastle reached.

As in the case of every new project of such a nature, the originators of the Central Pacific found themselves opposed by various elements of an unfriendly character. One of these was the hostility of the owners of a railroad running a short distance easterly from Sacramento, who were hostile because they thought the building of the Central Pacific would injure their property, but later sold out to Huntington and his colleagues. This opposition was not large,

but persistent; and its hostility could be traced in the antagonism to all the financial negotiations and local legislation in which the overland road was interested. In addition to this the citizens of San Francisco annoyed the company by declining to fulfil the contract they had made to exchange their bonds for the stock of the company. This matter was finally compromised by the city's giving $400,000 to the company rather than fulfil its agreement to exchange $600,000 of its bonds for the same amount of the railroad company's stock. Had it stood by its contract it would have lost nothing, as the stock sold later at par and over.

When Huntington entered the railroad company the credit of Huntington and Hopkins stood very high in New York; but capitalists there did not hesitate to tell him that he was placing himself in a very critical position. One day a member of a firm with which he had had extensive buisness relations said to him: "Huntington, you are really going into this big enterprise, are you? I suppose it is all well enough, but California is a long ways off." "Look here, my friend," smiled Huntington, "I suppose you are afraid to sell me goods?" "Oh, I don't want to say that exactly," was the embarrassed reply, "but California is a great distance from here." "Yes," replied Huntington, a little stung by his hesitancy; "the trouble is, it is a great way to California overland, and then it is so much farther around Cape Horn, that I think you had better send me a memorandum of what I owe you, and I'll give you a check for it." A few days afterward a representative of the firm called on him at his hotel to say that his employer did not desire to close up the account with Huntington and Hopkins. Mr Huntington answered, "It is closed."

As the construction of the road was to cost a very large amount of money, and as California was vitally interested in its completion, it was thought that the state should render some financial assistance. Therefore the builders of the road asked that Califor-

nia pay the interest on a million and a half of dollars for twenty years. This aid was freely granted, for the officers of the state knew it was a wise and proper thing to do, and that it would be, as it was, approved by the people.

The inadequacy of the act of congress of 1862 being recognized, a plan for further aid by the government was devised, and largely by Huntington's efforts the supplementary act of 1864 was passed. To his personal exertions the Central Pacific may perhaps be said to owe its existence as a completed road, for without this additional legislation it would have been simply impossible to build the first of our transcontinental thoroughfares. Finding it impracticable to work under the act of 1862, Mr Huntington got it amended in important particulars.

On the construction between Sacramento and Newcastle the directors had found it impracticable to obtain manageable labor under the system of letting out the work to contractors, and on account of this difficulty the company let the work eastward as far as the west line of Nevada to Charles Crocker. Mr Crocker began the work, and advanced fairly well until the fifty miles were reached. At that point he saw the necessity of associating with him other contractors who had more experience than himself in railroad-building, and who could also furnish capital adequate for so great a work; but it was soon found that none could be induced to join in an enterprise of such magnitude under an open copartnership. As soon as Mr Crocker showed the railroad company the difficulties under which he was laboring, it at once organized a contract company, and called it the Contract and Finance company, hoping that men would be induced to take stock in such a company, in which they knew their responsibilities would be limited to the amount of stock subscribed by them. When this Contract and Finance company had been

organized, Mr Huntington made great efforts to induce capitalists in the east to subscribe to its stock, such men as C. K. Garrison, Moses Taylor, W. E. Dodge, D. O. Mills, and many others of large means; but the answer in every case was substantially the same: "Mr Huntington, we are disposed to think that this is all as you say; that there will be large profits to those who go in, but these profits are remote, and the risks are certainly very great. We think we shall have to confine our investments to things nearer home, not with the chance of such large profits, perhaps, but with less risks." It was thus finally made plain that the road could not be completed except by the original parties taking the stock of the Contract and Finance company, and travelling with it, so to speak, to failure or success, as the case might be.

It was to this season of anxiety that Charles Crocker had special reference when he testified as follows: "I would have been glad to take a clean shirt, lose all I had, and quit."

Huntington foresaw that if he waited until eastern capitalists were convinced of the soundness of the undertaking, there was little hope of its accomplishment, and that, if it were necessary, they must put all of their money and personal credit into the work, and so push the construction across the Sierra Nevada at the earliest possible day. That done, and the work over the mountains finished, there would be no trouble in making eastern capitalists acknowledge the soundness of the enterprise, and no other argument could be so good as that the builders of the road themselves had risked their own means in the construction of a road across the most difficult mountain range in the world. When they had thus manifested their confidence, it would be comparatively easy to procure from the moneyed men of the eastern states all the funds needed, at the minimum rate of interest, to complete the road to Salt Lake City, and

possibly beyond that point, before they should meet and make actual connection with the Union Pacific on its way westward.

Eighteen hundred and sixty-six was a laborious and eventful year for Mr Huntington. In addition to his duties as the financial and purchasing agent of the company, he was called upon again to watch its interests in the national legislature. The act of 1862 had proved radically at fault; and now certain provisions of the act of 1864, which the company found to be inimical, must be corrected. To procure the proper amendments was naturally the task allotted to him. During all the long session of that year he spent four days each week in Washington, including Sunday, two days in New York, and one in Boston, which required him to pass four nights out of the seven on the cars. His days were full of work, and his nights broken and uncomfortable. But his cheerful adaptability and his exceptional vitality enabled him to pass through the ordeal without any perceptible tax upon his strength. According to his plan of avoiding a divided responsibility, he talked to congressmen one at a time, until he had laid his case, with all his ingenuity and force, before every one of them, except those who were interested in the Union Pacific or the Credit Mobilier. His bill passed the senate by a vote of 34 to 8. It passed, in the house, by a majority vote of 61, Thaddeus Stevens having charge of the measure in that branch of congress. In him Mr Huntington, to use his own words, found "a man who dared to stand up for the right, as he understood it, regardless of clamor, prejudice, or any other influence which sways the mere politician or time-server." His freedom from restraint in acting out his judgment, his boldness in antagonizing false sentiment, however general or popular it might seem, affords a striking contrast with the subserviency and trepidation of another member of the national legislature, who apologized to Mr Huntington for having

voted for the passage of the Thurman bill. Said the former, "I really believe it was an unjust bill, but the pressure of public opinion was such that I could not withstand it." Huntington's reply was, "I pity you, sir; from the bottom of my heart I pity you."

Mr Huntington's encounter with a congressman, whose name it is not necessary to give, during his presence in Washington in 1866, is an incident which shows with what readiness and crushing force he used the *argumentum ad hominem*. After the passage of the bill, while Huntington was standing inside the chamber, the congressman strode up to him and abruptly said: "Mr Huntington, there has been corruption here, sir, in passing that bill! There has been corruption, sir!" Huntington quietly smiled, and with a look of apparent concern replied, "Why, I am surprised to hear you say so." "Yes, sir," the man continued, growing irritated, "there has been corruption here, and money has been used, a great deal of money—to pass that bill!" "Well, now," good-naturedly replied Huntington, "I am pained to hear you speak in this way of your associates here; but I will be frank with you and tell you that I came prepared to pass that bill. I saw a large majority of the members, and explained to them the nature of the bill, and they said they would vote for it, and they did so on its merits, without one dollar. We wanted to get every vote. I went into the gallery, and through my glasses I carefully scrutinized the face of every man who was not committed to the passage of the bill, and I am a good judge of faces. I saw but one man in all that assembly whose vote I thought it might be possible to purchase with money, and you know very well that I did not endeavor to purchase that one."

Like all men of vast property interests which are subject to unfavorable legislation, Mr Huntington has been charged with unduly influencing the action of the government and of states and cities. But he

has often declared that he never tried to buy or influence a vote in any legislative body, or elsewhere, with money, for a vote is a sacred thing, and not a commodity to be bought and sold.

The expression, 'influencing legislation,' as commonly understood, is a term of reproach, and yet every citizen who declares his preference for one candidate for a legislative office over another actually influences legislation, and his representative is certainly influenced in his course on public questions by the views of that constituent. The necessities of men sometimes make it imperative that they exert their influence in obtaining fair, or forestalling unfair, legislation. When persons interested in important matters before a legislative body live at a distance, it becomes necessary for them to employ agents to take care of their interests. Effective service of this kind is not gratuitous.

Parliamentary agents are a recognized institution in London. It was proved before a commission that the parliamentary cost of explaining to committees and obtaining the necessary legislation for the Brighton railway averaged over £4,800 per mile, and of the Manchester and Birmingham £5,000 per mile. Of the Blackwall railway it was £14,400 per mile, while the solicitors' bills for the Southeastern railway amounted to a total of £240,000. In America the announcement of such an expenditure would startle and alarm the people. Not so in England. In the instances adduced, there was no evidence that any of the money was used illegitimately or for corrupt purposes, or with any other object than to explain fully and particularly to parliament the nature of the measures proposed, in order that the members might legislate intelligently thereon, rather than vote blindly for the lack of proper information, which information could not be obtained from any other sources than those from which it was offered. It is a fact patent to all who have had much to do with law-making,

that there are many things, especially in the matter of railroading, that law-makers know but little about —things in which they must be taught by practical men and interested parties.

Wadsworth, at the beginning of the Nevada desert, 192 miles from Sacramento, was finally reached, but this was not accomplished until July 1868, more than three years after the road was fairly started at Newcastle. From Wadsworth to Promontory, over 500 miles, the road was built in less than a year—an almost inconceivable rapidity when the difficulties of construction are considered.

The construction of the road across the mountains and plains was marked by many startling incidents, but the main fact on record is, that the rails of the Central Pacific and Union Pacific companies were brought together at Promontory May 10, 1869, about seven and a half years earlier than the act of congress called for completion.

Before this meeting of the roads took place, Mr Huntington had made a contract with the Union Pacific people that the Central Pacific would allow them to build to Promontory, if they would sell to the Central Pacific that part of the road lying between Promontory and Bonneville table—about fifty miles; and before any knowledge of this contract was made public, he telegraphed to one of his associates to buy up the land at Bonneville for depot purposes for the Central and Union Pacific roads; but his associate did not secure this land until it had become known that here was to be the point of junction. When Brigham Young learned where the contract called for the junction, he would not allow his people to sell land there, but insisted that the junction should be at Ogden, a city that the Mormons had laid out in building lots. This made it expensive to procure sufficient ground for depots.

In adjusting the relations between the Central and Union Pacific roads it was necessary for the former

to secure certain bonds, amounting to upwards of $2,700,000, which were held by the secretary of the treasury, McCullough. Huntington's persistence and patience were well illustrated in the campaign that he carried on in pursuit of this object. He brought to bear all the influence he could on the obstinate secretary, got a report from the attorney-general that his company was entitled to the bonds under the law, obtained another of the same tenor from the solicitor of the treasury, and had to have it brought before a cabinet meeting, a majority of whom decided that the Central was entitled to this portion of the subsidy.

While, therefore, the secretary had to admit that he was legally entitled to them, he declined to deliver them. "That is all right, Mr Secretary," said the patient caller, "but there are parties interested with me in these securities who will want to know the reasons. Please give me your reasons. I don't want to go back to New York without the bonds or the reason why I have not got them. Your attorney-general says we are entitled to them." "Yes," hesitated McCullough, "you do seem to be entitled to them." "Then give them to me." "I can't do it just now, Mr Huntington, but—" "Then give me the reasons, Mr Secretary;" but the secretary was obdurate. Daily, for nearly a week, Huntington kept pressing the high functionary for reasons or the bonds. At last, in great irritation, he said: "Mr Huntington, if you don't let me see these other gentlemen who are waiting behind you I will decide this matter against you."

"Now, Mr Secretary," said Huntington, "rather than the secretary of the United States should do a thing so foolish as that I would stay here indefinitely." After he had made this speech he stepped aside with becoming deference and sat down to wait.

As soon as Mr McCullough had seen his other visitors he sent for the officer who had charge of the bonds and told him to deliver them. He did so, and

with the securities in his possession Huntington left Washington the same evening.

Meanwhile the construction of the Western Pacific railroad, which was to run from Sacramento to San José, had been progressing. This company was organized in 1862, and was to receive a subsidy from the government of $16,000 per mile for 123 miles. In the spring of 1867 the contractors became embarrassed, or did not like to put any more money into the enterprise. An agreement was made between them, Huntington and his associates, and the Western Pacific railroad company, by which the contractors assigned all their interests to the Contract and Finance company, which completed the road.

Perhaps no honester praise has ever been given than that of the senator from Missouri, Mr Bogy, who, speaking in favor of the Thurman bill, passed in 1878, which the directors of the Central Pacific claimed to be an unwarrantable interference with the contract between the government and the roads, was compelled to yield this tribute to the genius that originated and carried out the great enterprise:

"I look upon the building of the railroad from the waters of the Missouri to the Pacific ocean, at the time particularly in which it was built, during the war, as perhaps the greatest achievement of the human race. I am old enough to remember when the scheme of a railroad from the waters of the Missouri to the Pacific ocean was looked upon as a wild dream, as a thing nearly impossible, if not entirely so. . . . . Yet it was accomplished. And, in truth and in fact, it was accomplished at a comparatively small cost to the government. The lands donated to the road were not worth a cent without a railroad. The government had an empire lying west, between the waters of the Missouri and the Pacific ocean—an empire which has sprung into great states and territories from that day —a country which has become of great advantage, and which would have been utterly worthless without the

railroad. It has bound to this portion of the union the Pacific coast with bands of iron, and no one can tell what might have been the destiny of that section during the war if it had not been for the railroad. . . . . I give to the men who originated and carried through this great enterprise all possible credit for doing a great thing, at the critical moment, in a very short space of time."

It might naturally be supposed that, having finally completed the great link which bound in iron bands the east and west, the promoters of this work would sit down and enjoy the fruits of their labors; but railroading is a business that differs from every other. When the dry goods merchant and the banker have stocked their establishments and placed themselves in readiness for barter and exchange, they may be said to have completed their circle, and can sit down in the middle of it; but the railroad company is ever confronted with new and varying necessities. As the country grows they must widen with it. As people form communities, and have the products of their farms and factories to dispose of, they demand railroad facilities. Thus the work of a railroad company, like that of a good housewife, is never done.

There are few subjects more interesting to the student of his country's growth and civilization than a railroad map, whereon from small beginnings can be traced the development of great systems, indicated by long through lines, with their feeders, or branches, bringing to them the accumulated produce of the sections of country which they traverse. If one would like to know where lie those countries that are foremost in the arts, refinements, sciences, manufactures, and other civilizing agencies that make a people great and powerful, he has only to note where the most lines of railroad cross and recross each other. These lines represent both the cause and the effect of progress.

The California of to-day is a sturdy figure com-

pared with the infant of 1849. Her advancement has been scarcely less than marvellous. Her future no man can estimate. Her phenomenal growth is very largely due to the facility of railway communications with the east and all parts of the United States, brought about by the men who did the work of building the first overland road. The sagacious insight into the future which led Huntington and his associates to devote themselves to the construction of a national highway over the Sierra Nevada, beckoned them ever onward to new fields of endeavor and conquest. The fertile valleys whose soft Spanish names conjure up visions of entrancing skies, balmy air, luxuriant vegetation, and delicious fruits, have now been opened up to the invalid, the tourist, and the husbandman by the entrance of the railroad tracks, and towns, cities, and counties, all over the vast area of California, vie with each other in marketing the products of their soil. The names of Huntington, Hopkins, Crocker, Miller, and Stanford form an integral part of the history of this great advance in civilization and enlightenment, while, also, their various enterprises, since the completion of the road, reveal the rare foresight and faith upon which they built for the benefit of themselves and their fellow-citizens.

At this point, a word in review to bring out Huntington's particular factorship more clearly.

In its every aspect, whether in the direction of the details, or in the solution of the broader and higher problems involved, the construction of the Central Pacific railroad was a gigantic undertaking. To fully appreciate its magnitude, the discouraging features of the times, which have been noted, must be held in mind. The government had granted aid in lands, and had granted bonds, but the preservation of the union was in doubt. The national credit was little better than that of solvent individuals. However feasible the undertaking, however aided by national credit, it

must depend for its character upon the personality of those directing it. The men who stood sponsors for this enterprise were citizens of the most remote and most obscure anglo-saxon civilization. What infancy is to manhood, their entry into the financial world at that time is to the broad credit they have since achieved. All the mechanical difficulties which confronted the construction of a railroad across the Sierra were dependent upon the solution of financial problems. The pecuniary phase of the undertaking became, therefore, the supreme consideration.

At the time of his arrival in New York to enter upon the serious duties which he had assumed, no railroad line had penetrated west of the Missouri river, and but a single line of telegraph was to be depended upon for communication. The line from the Missouri river to tide-water on the Pacific coast lay through a country occupied by untamed savages, whose hostility would seriously complicate the task in hand. There was then no other name for this intervening region but the great American desert. The South pass was the only geographical designation on any map, indicating a gateway through the Rocky mountains. Few believed in the practicability of a railway through that pass. The territory to be opened by the construction of the road was greater than that subdued by Cæsar in all his wars of conquest.

The condition of affairs in California, the Pacific coast end of the route, was signally unfavorable to the prosecution of such a work. The settlement of the Pacific States had been confined to an enterprising pioneer class, and the condition of the labor market was hopelessly deficient for such an undertaking. The region was equally destitute of raw materials, for the manufacture of rails or iron, for locomotives, etc., in short, for every part of the equipment except rock and timber, and for hundreds of miles even these were wanting. California pos-

sessed neither the labor nor the manufacturing skill and capital which could be relied upon for the equipment or even the construction of a railroad. Necessarily all these things had to be supplied from abroad. All the iron laid down, all used in construction, all demanded by mechanical appliances to operate the road, had to be shipped from the Atlantic seaboard, either around Cape Horn, the longest voyage made for commercial purposes on the face of the globe, or across the Isthmus, by rail, to connect with steamship lines on the Pacific ocean, at an enormous expenditure of money for freight and insurance. The belligerent condition of the country augmented greatly these complications.

As the financial agent, by whose finesse, address, and skill the funds necessary for the prosecution of the work must be obtained, and as purchasing agent, who must procure and ship everything used in the construction and equipment of the road, Mr. Huntington confronted difficulties compared with which the mere mechanical feat of removing earth, constructing bridges, and drilling tunnels sinks into insignificance. The execution of the trust committed to him demanded the combined ability of the financier, the diplomat, and the negotiator. The successful construction of a railroad, however great the difficulties encountered, is but a triumph over inanimate things, but the financiering, the diplomacy, and the negotiations necessary to the obtaining of capital for the prosecution of an untried and doubtful experiment is a contest in which success is achieved only by a triumph of mind over mind. The manner in which these difficulties were met and overcome by Mr Huntington proves the possession on his part of ability equal to that of any American who has gained distinction upon these fields. The masterly manner in which the problems committed to him were solved entitles him to a foremost rank among those by whom has been accomplished the greatest financial and en-

gineering feat in an age which surpasses all others in such achievements.

If the construction of the first overland road was hastened by the outbreak of war, it is equally certain that the same cause delayed for many years the completion of the Southern Pacific line, which, skirting as it did the frontier of Mexico and forming the shortest possible route across the United States, should have been naturally the first transcontinental line to be built; for it had the approval of the army and of the secretary of war, not only as the shortest line and the least difficult in the amount of work to be done, but as the most necessary from a military point of view. In 1871 congress made certain grants to a Pacific road which should be distinctively a southern line. These grants included lands west of Texas, congress having no power to dispose of land in that state, and were made to the Texas and Pacific railway company, which was vested with a federal franchise. The act provided for a railroad from Marshall, in northeastern Texas, along the 32d° parallel, by the most direct and eligible route, via El Paso and Yuma to San Diego bay in southern California, with an extension at the east end from New Orleans to a point near Marshall, and with a connection at the west end from Tehachapi, half-way between San Francisco and Fort Yuma, into San Francisco. The extension in Louisiana was to be built by a corporation of that state, and the extension to San Francisco by a corporation of California, namely, the Southern Pacific. This latter company was in existence several years prior to the formation of the Texas and Pacific, and had a part of its road built when the act of 1871 was passed. Under the law the company was required to build after the first year not less than twenty miles annually on the northerly portion or main stem, and on the southerly portion from Tehachapi pass to Fort Yuma not less than fifty miles a year. This was a hard requirement, as money in those days

was difficult to get; and in the 350 miles or thereabouts between those two points, there lay two mountain crossings full of topographical difficulties, including some seventeen tunnels, one of them, the San Fernando, being 7,000 feet long; two dry deserts affording neither water nor sustenance of any kind for man or beast; while at one point the road had to cross what had been an ancient arm of the sea below the present ocean level, where the heat was almost insupportable, and where water for the engines on certain portions of the road had to be hauled a hundred miles.

Huntington and his associates realized fully what the establishment of a southern line threatened with respect to the Central Pacific, if built by others than themselves; for they knew that the building of it could but result in taking from the Central a portion of its business. He saw quickly the necessity of the moment, which was to control this line, and thereby reduce to its minimum the power of harming the Central.

There was another incentive to this construction in the hostility of San Francisco, which had frustrated many of the company's projects. Mr Huntington, when the Central Pacific was completed to Oakland, saw the necessity of having it continued to Goat island, as it would then reach deep water, and make the transfer so short that it would be almost equivalent to being in the city, for in fact the island is in the corporate limits. But the city opposed the railroad's occupation of the island. Mr Huntington then told the citizens that they were making a great mistake; that it would be largely to the city's benefit to have the island for the west terminus of the railroad, and that if the railroad was confined to the dry land of Oakland with its wide margin of shoal water, the great tonnage business of the road would be left at the straits of Carquinez, where deep water could be found along the margin of the dry ground on the shore of

the straits, and warehouses could be erected at small cost for the storage of the vast inland tonnage of California. San Francisco prevented the use of Goat island; the immense storehouses were built at the point to which commerce was sure to gravitate. This, too, without the expenditure by the company of large sums of money, which outlay would have been necessary had the road been allowed to make its terminus at Goat island.

In 1866 congress passed an act granting large tracts of land for the construction of the Atlantic and Pacific railroad, the same act giving a land grant to the Southern Pacific company to build from San Francisco to a point on the Colorado river near the Needles; but very little was done toward building, except to get control of the road from San Francisco to San José, and build from San José to Gilroy, when the owners offered to sell their property to the builders of the Central Pacific. Huntington and his associates bought it. After this purchase the road was built in every case according to the requirements of the acts under which it was built. When the Texas Pacific bill passed in 1871, making a large grant of land to build a road from northeastern Texas to San Diego, California, the same act gave a land grant to the Southern Pacific to build from Mojave station, on the line of the Southern Pacific from San Francisco, to the Needles, and to Fort Yuma on the Colorado river, in the extreme southeastern part of California, which was built according to the act making them the land grant. After building to Fort Yuma, the Texas and Pacific, which had not been able from financial and other troubles to build east through the territories, disputed for some considerable time the rights of the southern road, but finally assigned their land grant in the territories to the Southern Pacific company, which continued building eastward until they reached El Paso, thereby securing the right to the land grants in Arizona and New Mexico, and continued further

building and purchasing lines until they reached New Orleans, their present eastern terminus. In this brief statement is compressed a world of railroad history, in which Huntington was the central figure and dominating force.

The construction of their road by the Southern Pacific company to Yuma was not without incident, in which his characteristic foresight and fertility of resource were called into requisition; but it was the struggle to get beyond that point to a desirable eastern connection which brought him into the memorable conflict with Colonel Scott, of Pennsylvania railroad fame, who, as the president and controlling spirit of the Texas and Pacific road, was the Hercules, or rather the Ulysses, with whom he had to contend. Scott, having failed to comply with the act providing for the construction of the Texas and Pacific road by the date fixed, appeared before congress to ask for an extension of time. Huntington met him in the chamber of the Pacific railroad committee, where chiefly the issue was made and determined.

One day during the controversy between the two railroad magnates, which was a national sensation as long as it lasted, Scott met Huntington and said, "Huntington, we're beating you!" "Yes," said Huntington, in his quiet way, stroking his beard, "that's the way I should state it, Scott, because you are beating me in many things, but in the actual building of the railroad I shall beat you."

The difference in the methods of the two men in their contest was noticeable and characteristic. Scott would spend three or four hours before a congressional committee, while Huntington said his case was so fair and plain he could present it in a few minutes—in fact, it stated itself.

Bitter as the fight was between these two men, it never reached the point of personal animosity. Huntington told a friend afterward: "I liked Colonel Scott very much. Our railway interests were opposed,

that was all. Scott was one of the best fellows that ever lived—a whole-souled, large-hearted man. If it had not been for others, whom I will not name, Scott and I would have made an arrangement. When we got pretty well toward Fort Yuma, I told him I would meet him at Yuma, and we would make a close alliance and work together. His people dissuaded him from doing it, and so he kept on badgering congress for the sixty-eight millions that he wanted in order to build through to San Diego. A year later we got to Yuma. 'Then,' said I, 'I will meet you at Tucson. We can't wait for you to build clear through.' He would not do it. His friends just knew he was going to beat me. The next year, I think, we were at Benson. I told him finally: 'Now we will meet you at El Paso. You have six hundred miles to build, and we have two hundred.' But he said: 'No, I will not do it. I've got you now, Huntington. I have eight out of the thirteen men on the railroad committee sure.' There were twenty men in the room at the time. Said I: 'Colonel, I am surprised to hear you say that. I don't own a man of the thirteen, and don't know what they are going to do, and here you say you have got eight of them sure. The committee were to meet the next day. That night Scott and I had a long talk together, and at midnight he had practically agreed to form an alliance with me, by which we were to meet at El Paso, and he was to stop there. But at the last minute he refused to say decisively whether he would do it or not, and when we parted he said: 'I'll give you my final decision to-morrow morning at 7 o'clock.' 'All right,' said I.

"The next morning at 7 o'clock I had a trusted agent at Scott's room in the hotel. Scott hadn't got up yet. My agent said: 'Well, Colonel Scott, I have come to get your answer to Mr Huntington's proposition.' Scott raised himself up in bed on one elbow and rubbed his eyes. 'Ah, yes,' said he, 'tell Hunt-

ington I'll see him in a little while.' 'But,' said my man, 'Mr Huntington wants yes or no.' 'Yes, yes, I know,' said the colonel, 'I am going to get right up, and I will be down in a minute or two.' 'That won't do,' said my messenger; 'it's yes or no, colonel, and I would advise you to say one thing or the other. Remember what I say; it's your last chance!' Still Scott evaded the issue and shifted around to get time. He had been talking with his counsel and other friends, and they had told him that Huntington was scared or he would not be so anxious about this matter at the last moment, and that he, Scott, had the committee sure. When my representative left him, the colonel was slowly getting into his clothes, but it was too late. I had decided to take my chances of the fight, and when the committee met it was found that instead of standing eight to five in favor of Scott, they stood eight to five in favor of my company, and his bill was effectually smothered."

Years after this incident, Scott, chatting one day with the well-known Nevada millionaire, J. W. Mackay, said: "Mackay, that man Huntington is the hardest block I ever stumbled against!"

While Mr Huntington was deep in the contest with Mr Scott, the Central Pacific was the object of much solicitous discussion on the part of congress. The act of 1862 had long since been shown to be inadequate in its provisions to insure the building of the railroad. The act of 1864, which was passed to remedy the defect and to give better facilities to the company for raising money, had also been found insufficient so far as the return of the money to the government was concerned. As the years passed by, it was seen that the requirements concerning the transportation of government supplies, and the five per cent of net income to be paid to the government, would not result in the payment of the debt.

The question being put to Mr Huntington, "How did it happen that the road fell so short in this

respect?" he answered: "It was overlooked by the builders of the road and by the government that when the railroad was completed it would of itself do the policing of all that section of country through which it was built. This proved to be the case; hence it was not necessary for the government to send troops or supplies for the purpose anticipated. Therefore the company was not called upon, and consequently derived but little revenue from the government for the service contemplated in the act of congress. The result proved that the government builded better than it knew."

An attempt was made, through the so-called Thurman act, to force the Central Pacific and the Union Pacific roads to repay to the United States the interest on the bonds, as the same was paid by the government; but the supreme court decided that the two companies were under no obligation to refund to the United States the interest paid before the maturity of the principal of the bonds. In point of fact, the payment of the interest or the principal of these bonds in money was an afterthought, and by the terms of the contract contained either in the act of 1862 or the amendment of 1864, they were called upon to pay only in services and without regard to time.

It is particularly interesting at this point to look back at the debates on those two bills, and note the temper of congress and its evident intentions and purposes, at a time when the whole country regarded the enterprise of a Pacific railroad in the light of a difficult problem, the solving of which meant incalculable benefits to the nation. During the discussion of the bill of 1862, Mr Howard of Michigan, chairman of the senate committee on Pacific railroads, who reported the bill, said:

"When the road shall have been completed, assuming the bonds issued to be $62,880,000, the maximum estimate and the entire interest will be but $3,773,800 per annum. The present able chairman of the

house committee took occasion to inquire directly of the government the exact cost to the government of the transportation provided for by this bill, and found it to be $7,357,000, or about one hundred per cent more than the full charge of interest against the government when the road shall have been completed. I now call the attention of senators to this consideration, or rather to this pregnant fact, not to be ignored or avoided, that the difference between the interest, $3,773,800, and the present cost, $7,357,000, with the five per cent reserved to the government by the bill, would necessarily pay the government bonds and interest years before the government bonds would mature."

Senator Wilson of Massachusetts said:

"As to the security the United States takes in this road, I would not give the paper it is written on for the whole of it. I do not suppose it is ever to come back in any form except in doing on the road the business we need, carrying our mails and munitions of war. We ought not to vote for the bill with the expectation or with the understanding that the money which we advance is ever to come back into the treasury of the United States. I vote for the bill with the expectation that all we get out of the road, and I think that it is a good deal, will be the mail carrying and the carrying of munitions of war, and such things as the government needs. I believe no man can examine the subject and believe it will come back in any other way than is provided for in this bill, and that provision is for the carrying of the mails and doing certain other work for the government.

"I have little confidence in the estimates made by senators or members of the house of representatives as to the great profits which are to be made and the immense business to be done by this road. I give no grudging vote in giving away either money or land. I would sink one hundred millions of dollars to build

the road, and do it most cheerfully, and think I had done a great thing for my country if I could bring it about. What are seventy-five or a hundred millions in opening a railroad across the central regions of this continent, which will connect the people of the Pacific and the Atlantic and bind them together?"

Said Mr Wade:

"Sir, your money will not be lost. In a pecuniary point of view it will be a gain to this government to make these facilities for settling this wilderness. It will strengthen us in a military point of view. It will strengthen the union, which is more than all. It will do more for the country than we have done for any number of years past."

Mr Collamore said:

"The bill carries the idea, and this section provides for the repayment of the loan, as gentlemen call it. In a subsequent section it is provided that the payment shall be made in the carrying of the mails, supplies, and military stores for the government at fair prices, and also five per cent of the net proceeds or sums to be set apart for the government. That is all the provision there is in the bill for repayment."

Mr White of Indiana, when he spoke the following words, certainly expressed the views entertained at the time by a majority of the representatives in congress:

"Now, sir, I contend, that although this bill provides for the repayment of the money advanced by the government, it is not expected that a cent of the money will ever be repaid. If the committee intended that it should be repaid, they would have required it to be paid out of the gross earnings of the road, as is done with the roads in Missouri, Iowa, and other states, and not from the net earnings. There is not, perhaps, one company in a hundred where the roads are most prosperous that has any net at all. I undertake to say that not a cent of these advances will ever be repaid, nor do I think it desirable that

they should be repaid. The road is to be the highway of the nation, and we ought to take care that the rates provided shall be moderate. I think, therefore, that this will turn out a mere bonus to the Pacific railroad, as it ought to be."

Mr Huntington and his associates, notwithstanding the members of congress who made the legislation did not expect to get anything in return, except the five per cent of the net earnings of such service as the government should need, did not wish to have this large balance running against the company, and therefore passed resolutions in their board creating a sinking fund whereby this snm should be reduced; but before this could be fairly organized, Senator Thurman, of Ohio, introduced a bill, which passed through congress, taking this sinking fund out of the hands of the company, and compelling its payment into the treasury of the United States, to be handled by the treasurer, whose investments up to 1890 were a loss to the company instead of a gain, while if the company had been allowed to handle their own sinking fund the accretions would have been millions of dollars.

When the government chartered these roads it was believed by the builders and by the government that there would not be another railroad constructed across the continent; but before the overland road had been completed, the government gave to another road—Northern Pacific—a competing line, a subsidy in land and bonds of greater value than had been granted to the Central and Union. Moreover, the Northern Pacific not only divided the volume of business with the Central line, but reduced rates very largely. Also a little later the government granted to the Atlantic and Pacific, another competing road, land that was of more value than the lands it granted and the bonds it loaned to the Central and Union Pacific, which again divided the volume of business and reduced rates. Of course the government knew

that it was destroying the power of the Central and Union to repay the large advances it had made, as these roads were built when railroad material was at war prices, while the others were built when roads could be constructed for less than one-half what the Central and Union cost. While this was proper for the sovereign power to do, as it made it possible to police those high, dry regions in the centre of the continent, which was difficult to be done without the roads—admitting even this, still the government must have known that it would lessen the ability of the Central and Union to pay their debts to the government. The amount due the government is large, and has to be paid out of the earnings of less than 300 miles of the road, between Reno, Nevada, and San José, California, as the rest of the aided road between Reno and Ogden, say 600 miles, has no earning power, and is simply used as a bridge to connect the rails between the east and the west. The payments to the government will have to be very small and extend over a long time, if paid at all, as the earnings of the road are from the people living along its line, while the government itself has destroyed its power to earn any net money on its through business by giving greater aid to other competing lines, and by the passage of its interstate commerce law, which allows the Canadian Pacific to do much of the overland business at cut rates, as it is outside of the control of the United States government, and virtually bars the Central and Union Pacific from competition.

Mr Huntington claims, in view of these general facts, that the action of the government in its treatment of the Pacific railroads raises many equitable considerations. How these will be disposed of is a matter for subsequent history.

While the railway system of California owes its existence and perfection, in such large measure, to the talent and industry of Mr Huntington, to the same

agency is due the conception and development of another vast system east of the Mississippi. The old landings on the Ohio river had been the terminus of what used to be known as the Breckenridge bridle path, for many years the only trail leading from Kentucky into Virginia. Afterward it was called the James river and Kanawha turnpike; then it became the James river and Kanawha canal, and still later grew into the Virginia Central railroad. With its ultimate evolution into the well-known Chesapeake and Ohio line, the history of Mr Huntington's railroad construction in the east begins.

The state of Virginia had nearly bankrupted herself in the endeavor to build a line of improvements from the Hampton roads, on the lower Chesapeake bay, to a connection with the navigable waters of the Ohio river. After all others interested in the work withdrew, Mr Huntington continued, and advanced sufficient means to complete the road and keep it open through the Kanawha and New River mountains to the Ohio, and thence to Memphis. It was the most expensive work ever done east of the Mississippi river. Some idea of the enormous outlay involved, and the prodigious obstacles encountered, may be gathered from the fact that in the neighborhood of Jerry's run, where there is one vertical fill of 200 feet, twenty-three miles between Covington and White Sulphur springs cost a little over $6,900,000.

Hampton roads, on the lower Chesapeake, are waters where more ships go for orders than perhaps to any other port in the United States. The roadstead is a good harbor, except for the fierce northeasters, when all that need be done for safety is to run around Newport point into Newport news, which is a perfect harbor, with an area almost without limit, and the waters of which have frozen over only twice in a century. At Newport news, the deep water terminus of the Huntington system, he has built a dry-dock, a marine railway, and a ship-yard,

which is probably the largest and most perfect in the world. The details of the various industries and the enormous business done at Newport news, dependent upon and deriving life from his enterprise, may be left to the imagination of the reader.

Mr Huntington, who had built the line of railroads, 1,040 miles in length, as indicated, west to Memphis, constructed, as one of a syndicate, the Louisville, New Orleans, and Texas railroad from Memphis to New Orleans, where it connects with the Southern Pacific road to San Francisco, completing a chain of railroads, known as the Huntington system, from Newport news to New Orleans. Thus the boy who left home to do for himself, single-handed and alone, with but one hundred and seventy-five hard-earned dollars in his purse, rides in his own car from ocean to ocean, nearly 4,000 miles, over roads created or owned in large part by himself, and under or subject to his control. There is no other such achievement in the history of the world. Yet its consequences to humanity are, in the aggregate, vastly more important and beneficial than to himself. One man's *quantum* of what the world can afford of comfort or happiness differs in but slight degree from that of another. The possibilities of fruition are actually determined by the requirements of human nature; and the requisites to contentment are much alike in all persons. In the case of every one possessing wealth, especially if it be kept actively employed, the measure of personal needs and uses being readily filled, there is an overflow of the world's goods which he commands to those who are involved in his activity. The greater his riches and the wider his enterprise, the larger the number of those whom he makes happy by affording them the means of supplying their needs and satisfying their proper desires. This is one of the most substantial ways in which a man's worth can be manifested. I speak without regard to philanthropy in the ordinary acceptation of the term;

yet of what avail is the spirit of benevolence without the means of doing good? These means are furnished, first or last, by those who, in the pursuit of their own ends, have made themselves the source of pecuniary benefits. So far as the result to others is concerned, their lives are a benefaction, whether they so intend or not. I look upon those who contribute to the well-being and prosperity of a community, though they may do so only in consequence of their efforts to promote their own interests, as benefactors, nevertheless, by virtue of their lives. There are many sorts and degrees of selfishness, from the sordid worship of self and antagonism to all else that is human, to that noble phase of self-interest which the philosophers themselves labor to distinguish from disinterestedness. But Huntington has not been a heedless or unconscious factor in building up a great many persons, creating values and enlarging civilization and happiness within very wide limits. It has always been to him a source of much pleasure to anticipate the general usefulness of every enterprise upon which he proposed to embark; and his greatest satisfaction is to realize that he has been instrumental in helping and elevating others. It is pleasing to note that in his struggle with the elements of nature, human and material, the conflict has not made him hard and unsympathetic. His life has been a long series of benefits to the many within the range of his influence as a developer of industry, while his quietly bestowed and discriminating charities make it plain that he enjoys planning for the happiness of others.

Such a life cannot be scrutinized too closely. The lessons to be derived therefrom are a contribution to all that is most valuable in human experience, which is our best knowledge and guide.

Among the other great enterprises in which he is engaged in the east, apart from his associates in the building of the overland road, who confined their operations to the Pacific coast, may be mentioned

his interest in the United States and Brazil Steamship company, which runs a line of steamers from New York to Brazil. Three other lines had been put on this route, but all were withdrawn on account of losses. Huntington and his associates lost large amounts of money, but, influenced largely by his patience and determination, the company continued until the undertaking was made to pay. He is interested in the Old Dominion Steamship company, and also in the Pacific Improvement company, and the Morgan line, now owned by the Pacific Improvement company, which owns and employs the best freight ships that run out of New York.

Thus with the brevity consistent with the serious nature of the subject, I have endevored to present the experience and life-work of this most important study among the builders of the Pacific coast. A few of his distinctive traits of character have been already noted. He should be seen from as many other points of view as possible, for in all things, though strictly practical, his originality is striking. His whole life has been one of self-imposed and cheerful labor. He has loved work not only for its results, but for itself, philosophically cherishing the belief that without personal effort there is no development commensurate with a man's capabilites. Yet his intellectuality has been of that distinct order which is elastic, restful, and recuperative; hence his endurance, which otherwise would appear inexplicable.

"I do not work hard," he says. "I work easy. There are very few people who work too hard, but there are a great many who do not work right." He leaves his business in his office, and, divested of all care, when he goes to bed it is to sleep, not to think, applying even in this way the principle of economy, which has been the rule of his life, to the preservation of health and strength. Every day he is a new man.

"Each morning sees some task begun,
Each evening sees it close."

Of warm and sympathetic temperament, fortunately his home has not only been his castle, but a haven of rest and recreation. At its threshold whatever load may have oppressed him drops from his shoulders; under its peaceful roof a truce to commerce and the contentious world. He is patient withal. Recognizing the inevitable—that art is long and time is fleeting—he has exemplified the invincible power of one who is able to labor and to wait. His life, therefore, at every point, has been in the future, and continues to be so. His aspirations have all been large, involving faith and confidence in his plans for remote results. Distinct from the ordinary man, immediate or proximate things have not concerned him except as essential means to important ends. Hence the characteristic stability of his creations. His enterprises, requiring time for their completion, must stand when finished; to contemplate less than the maximum duration for his work would be to him hardly less than mental suicide. In all his railway building the excellence and permanency of the roadbed are regarded by him as the cardinal virtue; he builds railroads to operate, not to sell. His predisposition in this respect is wholesome, and in contrast with the ambition of many other railroad men, who regard their property as speculative, and prize it mainly as an instrumentality of fortune by manipulation or wreckage.

The wider the scope, the greater the comprehensiveness of a scheme, the better it comports with the character of his mind—the more gratifying it is to his marvellous faculty for generalization and analysis. In the gradual combination of his interests west of the Mississippi into one great corporation—the Southern Pacific company—and those east of the Mississippi into another—the Newport News and Mississippi valley company—Mr Huntington expresses his judgment regarding the advantage of consolidation. He believes that the great need of the commercial and

travelling public in America is the consolidation of the great competing trunk lines. This, he insists, would benefit every one, instead of resulting, as the present policy does, in the instability of rates through reckless competition, the extravagant losses caused by the railroad wars, and the consequent deterioration of property values occasioned by the feeling of insecurity on the part of those having money invested in railroad bonds and stocks. He expresses the opinion that probably twenty-five per cent of the profits of the railroads of the United States is paid in the way of rebates and drawbacks to ticket agents, brokers, and middlemen, a great part of which would be saved by joint ownership, which would give a profit to railroads, which are now really losing money, without the necessity of advancing present rates; hence the benefit not only to the owners of the road, but their patrons; that if this idea of joint ownership could be so carried out so as not to have more than the carrying companies in the United States, it would be largely beneficial, not only to the owners of these properties, but to those who use them. A consolidation involving principles and details of such an intricate and complex nature would overwhelm and dismay almost any other man, even in the United States, where boldness of enterprise is proverbial; but in his mind the problem is reduced to perfect simplicity. Said a competent critic: "Nobody but Huntington would have the boldness to march squarely up to a proposition like this; but he demonstrates its feasibility with a lucidness peculiarly his own."

Men having the genius for originating great enterprises, devising general policies, and possessing the administrative force necessary to execute their plans, have seldom been credited with the mastery of details. The possession of eminent administrative ability presupposes an habitual mental attitude commanding a general rather than a specific view of things.

It is like the study of topography from a commanding summit, wherein the minutiæ of detail are obscured by distance. However true this may be of men in general, Mr Huntington affords a conspicuous example of one equally master in the conception of general policies and the direction of the smallest details. The possession of these characteristics is due chiefly to the clearness and incisiveness of his mind, which perceives with a glance all the bearings of a business proposition at once. Endowed with the faculty of concentration, with a directness of method which is intolerant of any digression from the subject under consideration, he reaches the end of a negotiation directly. Thus affairs of the largest magnitude, in the consideration of which other men consume days, are with him concluded in as many hours.

It is the general belief that one possessed of such ability for the practical affairs of life can have but slight interest in things beyond the realm of his immediate cares. Mr Huntington is a striking exception to this rule. The controlling motive in some of the most notable schemes of his active and busy brain has been the accomplishment of results for the public good. One of the incentives to the construction of an overland railroad was the influence its completion would have upon the solution of the slavery question, by reason of the creation of new free states. Mr Huntington saw clearly that the construction of a great highway of commerce from the Atlantic to the Pacific seaboard, along the latitudes of freedom, would extend settlement along this highway, which would carry with it the institutions of the free states of this republic; that northern settlement and sympathies would be first in possession of the great unsettled territory west of the Missouri river, if it secured first and most important communication. In making a subscription to the construction of a railroad in the Congo basin, Mr Huntington remarked that if the investment were wholly lost he

would find his compensation in promoting the civilization of the dark continent. The profession of this motive was referred to derisively by some of the public journals of the country, whose doubt of its sincerity proceeded from their inability to recognize philanthropic motives in one so distinguished in the financial and commercial world.

The great public has known nothing of Mr Huntington's personality, except that which is disclosed by the splendid energy displayed in public enterprise, owing to the absence in his mind of that species of vanity which constantly obtrudes itself upon public attention in the form of published papers, speeches, and newspaper interviews. He has been indifferent to comment; and being satisfied with the rectitude of his own conduct, he has never had, nor would he have, what most men of his rank seem to regard as indispensable, that is, an "organ." He might escape the strictures of the press if he would, but he is too independent to explain for the sake of conciliation. Among those whose knowledge of his character is derived from personal acquaintanceship, the expression of his feelings regarding the Congo investment was regarded as in perfect consonance with the controlling motives of his life.

Another distinctive feature of Mr Huntington's intellectuality is the abnormal retentiveness of his memory. He not only remembers the minutiæ as well as the general facts regarding a subject that he is specially interested in and has investigated for a purpose, but affairs, events, names, and dates, casually mentioned within his hearing, find a permanent lodgment in his sensitive mind, as though through his ears and eyes the process of mental photography had been continuous, forming upon his brain indelible and vivid pictures. Upon this vast repertory, accumulated during a long life of activity and variety, he draws for information in emergency at an instant's notice, sometimes with startling effect. This mar-

vellous faculty simplifies and expedites his work, and makes easy to him the administration of vast affairs which would bewilder and crush most others.

Possessed of such dominant mental characteristics, he is aptly described by Max Nordau as one of "those men who, combining genius in judgment with genius in will, rank the highest of all. These are men of action, they who make history, who form nations intellectually and materially, and dictate their fate for years to come—organizers, creators of states." Such men cannot endure the restraint of interference; in whatever they undertake they must control. They are born leaders. It is but the natural consequence of his peculiar ability and disposition that, never shirking but always pleased to assume responsibility, he has been the controlling as well as the creating power in all the great enterprises of his life.

In the formation of the railroad syndicate at Sacramento, the directory of which continued so long unchanged, except by the death of its members, Mr Huntington chose to be vice-president; so, also, in the directory of the Southern Pacific company, in the creation of which his factorship was perhaps even more conspicuous, though not more distinct, than in the Central Pacific. He could not but feel that in the conception and promotion of these undertakings his had been the greater part, but he did not covet that conspicuity of station which most others delight in. Were it not requisite, in the nature of things, that he should be the actual incumbent of a commanding executive office, it would be a matter of no special concern to him whether or not his name were known in the administration of the companies' affairs. From the outset, there never was a question as to his occupying whatever place in the directory he might desire. "The bubble reputation," therefore, did not attract him; nor did he, on the other hand, by reason of any sentiment, prefer the shade of ostensible second place. The underlying fact is, that he has looked

upon railroading at all times as a purely impersonal business proposition; and he has been totally indifferent to that sort of distinction which, in the superficial public mind, is associated with nominal functions. "The world is still deceived with ornament," says Shakespeare, and, in the sense intimated, no one has a finer appreciation of the poet's philosophy than Mr Huntington. It is not surprising, therefore, that in certain regards he holds what is assumed to be the estimate of the masses, who judge by appearances alone, in utter disregard. Subserviency to popular sentiment, in whatever forms, arouses an irrepressible antagonism in him, and he is not slow to characterize demagogy according to his mind or the occasion, crushing its mask with the blunt weapon of facts, or making its very disguise an advertisement of its hypocrisy by his quaint irony. It is constitutionally abhorrent to him to wish to enlarge himself in the estimation of others by any of the prevalent methods of form or affectation, sham, or pretence. His hostility to every unsubstantial process of self-aggrandizement distinguishes him from the majority of men, among whom there are some who, occupying eminent position and accredited with greatness, lay much stress upon the influence and dignity which office or station confers upon them. Certain it is, however uncomplimentary it may be, that a large part of aspiring humanity are puffed up by the prestige of position, satisfied with themselves, either because they are not wise enough to realize that their preferment is adventitious, or because they are so weak as to indulge themselves in the conceit that the place they occupy derives its character from their personality.

Mr Huntington's selection of office for himself in all his enterprises has been determined solely with reference to business utility and fitness, uninfluenced by any thought or care whether he might be magnified or diminished thereby in the appreciation of the outside or the inside world. Although he has con-

trolled in every undertaking in which he has participated, and has had the option of placing his name at the head of the official list, he has scarcely ever seen fit to do so, good-humoredly indulging with this honor some associate more ambitious in this direction than himself, yet at the same time eligible; while, however, his own weight in the administration of affairs would be none the less because of apparent inferiority in rank. This extremely business-like view of business has been a marked feature of his career. It has been his standard from the inception of the first overland railroad, at all times, and never more so than when, at the annual meeting of the Southern Pacific company, in April 1890, he deemed it best for the common interest that he should be elected to the presidency. On various occasions during the thirty years' history of the railroad system on the coast he has found it necessary to take a firm, strong hold of the helm in order to restore the colossal business ship to her bearings, although the management of the Central and Southern Pacific roads is on the whole considered first-class in railroad circles. In asserting his control, however, he has been always careful and deliberate, never interfering to change the course of affairs unless change or correction were positively needed. At all times he has been patient and tolerant, for no one realizes more clearly than himself the difficulty of maintaining perfect service in all the details of a vast commercial enterprise; but whenever he has perceived that business required it, he has not hesitated to interpose and insist upon radical and complete reform, and to see that it was carried out to the letter. Living for the most part of the year in the east, at a distance from the home office, he had preferred that the presidency should be filled by one of his associates who resided in California. When, therefore, he became president, it was not because he had any greater inclination to occupy the office then than he had previously had. He assumed it at some

personal sacrifice, and for strictly business reasons, the chief of which was to re-establish the Pacific railroad system upon an exclusive and radical business basis. He deemed it unwise and demoralizing for the company, in the *personnel* of the directory or its employés, to allow their minds to be diverted in any manner from the legitimate and clearly defined objects of railroading, which is altogether a commercial enterprise. A railroad is a business institution, and, as such, whatever those who are connected with it may do as individual citizens, it should hold itself aloof from politics. Its alliance with any political party is not only unnecessary, but injurious to its best interests. Among candidates for those offices in which it is interested, it can select fair, unprejudiced, capable men upon whom it can rely for the security of its rights and privileges; while the identification of a railroad with either party cannot fail to excite the animosity and make it the object of attack of the opposing party. In other words, a railroad company which becomes a partisian in politics stakes its vital interests upon a speculation. It must suffer serious loss if its party wins, while if that party is beaten at the polls, it has at once to encounter the hostility of the new government. The inevitable effect of mixing partisan politics with railroading or any other business is to degrade the latter and injure it by turning it from its proper channel. For years Mr Huntington had observed the railroads on the coast in which he was deeply interested gravitating into a permanent and recognized alliance with the republican party, of which he himself has been a consistent and earnest member from the date of its foundation. His objection was not to the party that his associates chose to espouse, for it is his own, is now the strongest at the polls, and may continue so indefinitely; but to affiliation with any party which had tended to make the railroad organization a political machine and caused its offices to be turned into a rendezvous for politicians.

This was the state of affairs which he discussed in his address to the board of directors at the annual meeting referred to. He spoke plainly, hewing to the line, the chips falling where they would. His address was widely published and commented upon, and is written upon the minds of the people of the coast. The policy enunciated, which will surely be put into execution, will allay the popular irritation and ill-will caused by a gigantic corporation's going unnecessarily beyond its province to influence elections, and will add to the railroad securities whatever value there is in the respect and good-will of its patrons.

This incident in Mr Huntington's career is noteworthy as showing the great value of single-mindedness and consistency in the pursuit of an object. The perfect control and successful promotion of a great enterprise require an exclusiveness and concentration of purpose which admits of no division of energy or dalliance with collateral issues. To what degree his ability to so centralize his thoughts and keep his activity confined to the work on hand as to give him the mastery of whatever he undertakes is due to his superior mental and physical organization, or to what extent it is the result of his experience and friction among men in overcoming obstacles, is a question too psychological in character to be answered with definiteness. But I apprehend that although he possessed the natural equipment for supremacy, he owes the development and availability of his inherent strength to painstaking observation and the practice of those virtues which, brought into full play, give force and character to every man in accordance with the gifts with which he is endowed. From this a lesson is deduced, to point the moral of which more generally literature affords no illustration more beautiful or more practical than the scripture parable of the talents. There are no two definitions of genius that are identical or that can be made to harmonize entirely. It is ob-

vious that without original endowment of heart and brain, no amount of labor, however well applied, could have produced a Shakespeare, a Newton, a Beethoven, or a Michael Angelo; still we have this testimony from the mathematician just named: "If I have done the public any service, it is due to nothing but industry and patient thought." We have indeed but to glance at the biographies of illustrious workers, in whatever department of labor, to find that the most distinguished among them owe their success to indefatigable application and devotion to special tasks.

So with Mr Huntington, in the sphere of his great success, he has acquired power and compelled admiration by persistent, exclusive application of his strength to the perfection of his undertakings. Possessing sound judgment, tireless spirit, and indomitable will, and moving continuously, intelligently, and cheerfully towards a single, fixed, and high standard, it is not surprising that he should remove mountains, figuratively and literally. The magnitude of his achievements would excite less surprise if the man were better known in his strength, and could be seen applying his wealth of resource methodically and without strain to a well-defined purpose. He is more remarkable than all his works, for they are not the full measure of his capabilities. Without any disposition or ground for disparagement of others, who, among his associates, would have been a safe and competent man in his place—who so able as he, always consistent, single-minded, and intolerant of unbusiness-like distractions, to smile at cares and difficulties, and carry the burden of vital responsibilities with so little wear and tear?

Yet it would be difficult to find a man more considerate of others. Without affectation, he is the same Huntington now as formerly. Of all the men of his business circle he is perhaps the most accessible. No one coming with a legitimate object in view

is denied admission to him, and all are heard patiently and with discriminating consideration. He is so scrupulously careful to answer all proper communications addressed to him, that a sure way of securing his attention is to write him a letter.

Among those who call upon him at his business headquarters are people in all stations of life, from the most exalted to the humblest citizens of the land. His hours are precious, but he is invariably courteous, insisting only that his visitors come to the point of their business at once. And he is very little annoyed in this way, for the person who should try to impose upon him or engage him in empty talk must be a prodigy of impertinence and ingenuity as well, and who, finding himself pleasantly weighed and measured and stripped of indirection and verbiage, would find one call enough. He is fond of anecdote, and has an original way of telling a story for the purpose of clinching an argument or bewildering an adversary, his power being similar to and not less than that possessed by Mr Lincoln. It is a happy expedient, which he often finds effective in difficult negotiations, making himself impenetrable, and rarely, if ever, failing to obtain the advantage of position by throwing his adversary off his guard. Only recently a German capitalist, after an interview with him concerning a transaction involving many millions of dollars, was completely nonplussed, and naïvely remarked, "Mr Huntington seems to have been very successful in business, but he is a queer man. At the most important point in our negotiation he stopped to tell a story."

His self-control is so great that no one has ever seen him give vent to passion or show alarm at danger. During what is called the rich men's panic in New York city, in 1884, his imperturbability was subjected to the supreme test. During that crisis no man's reputation was safe, and the greatest distrust prevailed. "Is it true," asked a reporter of

Mr Huntingon, "that you have suspended payment?" The annoyance caused him by this imputation upon an unimpeached credit of half a century was extreme, yet there was no perceptible change in the expression of his countenance. After a moment's deliberation he replied with full courtesy, but just a little dryly: "Young man, I have been in business nearly fifty years, and have always paid my debts; you will have to look somewhere else for a failure."

A prominent banker of New York, speaking of this remarkable period, said: "I consider that C. P. Huntington was the key of the arch that held up the people here all the way from May to the close of the year. It seemed to me as if all the imps at one time were trying to break him down; but he met all calls on him without wavering. Yet the shrinkage of his properties must alone have amounted to millions; still he never asked any special favors, and paid up whenever the money was wanted."

Mr Huntington, too, had some instructive comments to make upon the situation during these exciting days. "The number," said he, "of really great financiers in the banking business is small. The times when the release of money will benefit the community are the very times chosen by a majority of bankers to lock up money. What is their reserve for but for just such emergencies as the depression of 1884? Naturally the course they adopt precipitates disaster, and to it may be attributed many of the failures of good, honest business houses, which only need wise treatment on the part of the banks to enable them to tide over their temporary embarrassments; but such firms, through the weakness of what should be their bulwarks in times of trouble, are compelled to go to the wall, dragging down others with them, and involving perhaps a whole community in disaster."

As heretofore intimated, the element of faith, in the sense of self-confidence, which is rational and not egotistical, enters largely into Mr Huntington's com-

position. His temperament is hopeful, and perhaps sanguine in consequence; at any rate he borrows no trouble from apprehension. Having to pay out millions of dollars on the morrow, he has gone to bed not knowing how in the world he will be able to meet the obligation, but he sleeps as soundly as if he had the required funds deposited to his credit for the purpose. The emergency at hand, he meets it. He never fights with obstacles until he encounters them. One of his favorite maxims is, that whatever ought to be done can be done; and that it does not matter so much what you have to do, the important thing being how to do it.

This assurance, which is a source of tremendous reserve force, renders him bold, decisive, and withal calm and certain of his position when others fret, and in common parlance lose their heads. The fears that disturb capitalists generally have never given him any alarm.

The vexed questions arising out of the antagonism created between labor and capital he thinks ought not to exist, and can in almost all cases be removed if the supposed differences which divide the parties in interest be fairly presented. But with agitators, whom he regards as the prime cause of such mischief, he has no patience. He once said, after an impending strike on one of his lines had been averted: "There are no employés on my roads in whom I take more interest than in the engineers. I have a high regard for them, and on my trips like to go to the cab and talk with them. They are an excellent class of men in physique, intelligence, spirit, and loyalty, and if a case cannot be laid before them so plainly as to remove any cause of bitterness or discontent, there must be something wrong." Mr Huntington has always enjoyed the respect and esteem of his many employés, because of his appreciation and justice, as well as his unaffected and straightforward manner in dealing with them.

He has always been in sympathy with men who labor, especially so if they were subjected to unfair treatment. While he was friendly to the Chinese, it was not because they were Chinese, but he has frequently said that any one born of woman who obeys the laws of the country should have equal protection under its laws. "Cheap labor," continued Mr Huntington, speaking more particularly of the Chinese agitations in California, "is said to be one of the causes of communistic doctrines; but this is only another expression of the strife between providence and improvidence, thrift and waste, which has been going on ever since the world began. It is the effort of those who do not accumulate anything to obtain some of the savings of those who do. It seems as though it were ordered that wickedness and improvidence should not have the power of organization. I have no fear of any serious or lasting trouble from this source."

Mr Huntington's condemnation of the Chinese exclusion law he does not hesitate to express publicly. And when in 1890 congress was occupied with legislation intended to discriminate against the Chinamen still further, by requiring each of them, already in possession of every title to undisturbed residence in this country, to obtain from the census-taker a certificate of this right, failing to have which at any future time he would be considered as a trespasser, and forced to quit the soil of this our ostensibly free and generous domain, he denounced the measure with unqualified indignation.

Suppose the case reversed, and state it in this way, if you would get the force of his views on the subject: The Chinese government has ordered a census of the inhabitants of the Chinese empire, and as part of this proceeding it proposes that the census-takers shall make an accurate descriptive list of every American found in China on the day the census is taken. To every American thus present is to be

given a card of identification, and any American found in China thereafter, whether merchant, student, missionary, traveller, or laborer, without such card of identification, is to be deported at his own expense to the United States, or imprisoned for not more than five years; and shall be kept in prison until his deportation. After the date of the census no more Americans are to be allowed on any excuse to enter China.

And suppose China were to follow our example and shut out American merchants, travellers, and missionaries? We could not complain; yet such an act by the Chinese government would be savagely denounced in this country, and would cause very great loss and inconvenience.

Our diplomatic history was once the most honorable part of our national career, because we had dealt with nations as an honest and Christian people. The Scott act was disgraceful, and the next step proposed is both disgraceful and stupid.

He would not favor the unlimited immigration of Chinese, but he thinks it unwise to create irritation between a great nation like China and our own until some signs of danger should appear from such immigration. He sees no reason why the Chinese should be excluded, and more objectionable people from other nations allowed to come in, even if those others do have a vote. He is proud of his own country, because it allows the people of all nations to come and go, asking only that while they are here they obey our laws.

He feels a natural home pride in the fact that he had seen thoroughly his own country before he visited the old world. A few years ago he found it necessary to go to London on business. He was delighted with the vast capital, and expressed his admiration of it as a well-managed city. "The success of London," said he, "is assured by two things alone, if by nothing else. One is its magnificently paved

and well-ordered streets, the other its cab system. They are very shrewd and far-sighted, these Englishmen, and know well the worth of a dollar. Their conservatism is something wonderful. I think if you should give an Englishman a dollar for fifty cents, and on examination he should find that the dollar had a hole in it, reducing its value to ninety-nine cents, he would feel as though he had been injured. But they are excellent traders, and they make the whole world pay tribute to London."

In Paris Mr Huntington was less interested, perhaps because he had no special business to occupy his mind while there. "These Frenchmen," said he, "are a thrifty and saving people, and cultivate their country as I have never before seen a country cultivated."

From France he made a flying trip to Amsterdam and the Hague. For the honest toil, thrift, cleanliness, and economy of the Hollanders he could find only words of praise. Straining his eyes backward, as the carriage took him rapidly through the quaint streets of the Hague, he watched with intense satisfaction the gambols of a child in wooden shoes, who while hard at play kept her knitting in her hands.

In politics Mr Huntington began as a whig, when the party represented what he regarded as the great moral sentiment of the community; but upon the demoralization and death of the whig party he went with the free soil wing of the democratic party. When in 1852 the whigs introduced a clause in their platform apologizing for slavery, Huntington said: "This is the last that will be heard of the whigs as a national party." He has always acted with the republican party from its organization, although his friends say he is a republican who usually votes the democratic ticket. He denies this; but says that when the republicans have a candidate who is inferior to the democratic candidate for the same position, he cast his vote for the latter. Holding firm ideas

about the equal rights of all men, he has been ready with his influence and money to aid the party which in his judgment is the best for the whole people. His sympathy with and friendship for the negro has been manifested by frequent and large benefactions in their interest. Among these none stand out so prominently, as an illustration of wise and judicious charity, as the institution at Hampton, Virginia, called the Huntington Industrial works, where, it may be said, he has carried into a happy realization his practical ideas concerning the education of the colored man.

In 1877 his attention was drawn to the normal school there by the excellent results obtained. He had previously contributed liberally in its aid, and this year he added to his donations in order to found a permanent scholarship, the interest on which sum would forever pay the tuition of one colored student. Later he made special inquiries about a plan suggested for starting a saw-mill in connection with the institution. More and more pleased with the practicability of the idea, he looked carefully into the school organization, and had the legal title of the corporation to its property investigated. It was a period of philanthropic bubbles, but Mr Huntington at last became satisfied that here was a noble opportunity to elevate the negro in the direction most essential to his moral and physical well-being.

After contributing munificently to the improvements of the various other departments of the institution, in the year 1882 he provided a sum sufficient for the building and the equipment of the Huntington Industrial works, so named, not at his request, but by a voluntary act of the trustees. The history of the school's subsequent progress shows that the conception of the enterprise was a happy one.

In the Huntington Industrial works thirty-five colored students are employed, each of whom, by day labor and night study, makes a living, receives an

education, and acquires a manual skill of untold value.

These works are to the trustees most satisfactory, from the fact of being self-supporting, while industrial education, as a rule, is the most costly of all. Mr Huntington is the recipient of many grateful letters from the young graduates, who go forth yearly from the institution independent, self-reliant, educated citizens, and who have become useful examples among and educators of their less fortunate brethren. Their success is a cause of deep gratification to him, for it has proved his faith in the negro to be well-grounded, for, said he, "Let the negro once learn habits of thrift and economy, then give him a fair chance, and he will turn out a good and trustworthy citizen, able to hold his own anywhere."

The demands of charity made upon the conspicuously successful man of affairs are, of course, great, and the appeals to Mr Huntington are sufficiently numerous. In most of such cases his left hand knows not what his right hand does; but no one who is aware of the tender and generous sympathy which characterizes him would question either the volume or heartiness of his giving. An old acquaintance of '49 writes and asks for a little money, without which he must go to the poorhouse. "Well, well," Mr Huntington will say, "this man was once a clerk of mine, a real good fellow, who spent his money as he went along, and never had anything to show for it. I gave him $250 a month; then raised his salary, then he secured a position that brought him a large income, and still he spent it all. I used to tell him he would end in the poorhouse. Yes, that's what I used to tell him." But it leaks out after a while that he sent the petitioner, notwithstanding his impatience with improvidence and waste, an order on Huntington, Hopkins & Co. to pay the bearer fifty dollars a month, "only a little money to make his last days comfortable." Still, his purse is apt to close against

the appeals of those who live beyond their means. "If I had only fifty cents a day," he will say, "I would live on half of it, and so can other people."

His daily mail also brings him numberless descriptions of good things to be made by the combination of genius and capital, the writer professing his willingness to furnish the former if Huntington will put up the latter. Such allurements the financier declines, on the ground that he does not believe in capitalizing genius.

On the 12th of July 1884 Mr Huntington married Mrs Worsham, a native of Alabama, whose maiden name was A. D. Yarington. In this union were brought together two types of development that distinguish two widely different sections of the United States, each of which is marked by an intellectual and physical character that is superior in originality, independence, and strength, he being an exponent in his personality of the possibilities of New England stock, the eulogy of which is the history of the United States, she of rare beauty, imperial in form and carriage, and full of charity and tenderness, idealizing an aristocratic and scholarly ancestry peculiar to the best blood of the south. Though differing in the details of sentiment, opinion, and manner, owing to dissimilarity of early environment, yet strikingly alike in the sterling elements of character, they are at once the complement and supplement of each other, manifesting in mutual affection, loyalty, and appreciation the excellency and charm of perfect wedlock.

The children of Mr Huntington are Clara Elizabeth, the beautiful princess Hatzfeldt Wildenberg, and Archer Milton Huntington, a young man of magnificent physique, and possessed of fine mental gifts. He is an earnest student, devoting himself exclusively to literary pursuits.

High among the hills of Connecticut, in the quaint and airy old town of Harwinton, stands a beautiful chapel erected by Mr Huntington in memory of his

mother. In presenting the deeds to the property, October 22, 1887, he made a brief and informal address to those of his former townsfolk who came to witness the dedication ceremonies. In it the man stands out as he is. Every one who reads it will be impressed with its unaffectedness, its truth, and its honesty. In its simplicity is its strength, it comes from the heart, which is the source of all eloquence.

"I am glad to be with you here in this place of my nativity. I see before me many men and women whom I knew as children when I was a child, before I went out from this good old town of Harwinton. Years, more than half a hundred, have passed away since those days, and in that time great changes have come over us. Then I, and some of you, were barefooted children, and those that were then of middle age have passed on to that other land, and we who have stayed have become gray with years. In my childhood days my mother was here, and she often worked into the small hours of the night that her children might be comfortably clad on the morrow; and in the years that came later, her children worked so that her last days might be made, like herself, bright and full of sunshine; and in that was her reward. And as often as I have returned to these my native hills have I been made glad that this was the place where I was born, and that I was born poor; for I think that that was the reason, at least in part, of such success in life as I have been able to achieve. It was long years ago when I said to myself that what ought to be done could be done, and that success in life only meant labor with honesty of purpose and an intelligent economy; but I think most of the real joys in life come from doing good to others, in helping to raise those who fall, those who are below us to come up a little higher. Now as to this little chapel; I have built it because I wanted to build it for you who were children with me, and I also wanted to build it in memory of my mother, who was one of the best

women that ever lived; and I ask you to care for it, because I think it will do you and your children good; and I ask you to care for it also because it is in memory of my mother. I only hope it will give you as much pleasure in the receiving as it does the giver in giving."

I can readily picture to myself his striking and suggestive *personnel* on this occasion. Those who knew him only through his reputation as a conqueror in the war of commerce felt themselves in the presence of a great power—an aggressive force. To those who knew him well enough to take him all in all he was a manifestation of the truth that the mightiest are the tenderest. A massive figure, symmetrical and erect, slightly over six feet tall, his every movement bespoke domination and control. His hands dark and muscular, but well-shaped and comely, expressed his virile nature. Surmounting this stalwart frame is the magnificent head seen in the accompanying portrait, perfect in form and refinement of features, a head which we may travel a long way before finding its superior. From the expansive forehead the hair has retreated, and only a fringe of iron gray encircles the cranium on a line with the temples. The jaw, covered with a thick gray beard cut rather short, is square and solid.

Seen in three-quarter pose the countenance is rather stern and unyielding, and it is for this reason that the photographs of Mr Huntington fail to catch the expression that is so attractive to his intimate friends. Seen directly in front, the gray-blue eyes are kindly in their expression, and the light of an invariable good-humor shines in them. They question you with a penetrating look, and again beam with a swift intelligence. People who have met him for the first time have expressed an agreeable surprise upon finding him different from the picture they had mentally formed. Instead of being cold and uncompromising, they have found him a charmingly affable

man, full of a deep, practical earnestness, yet so buoyant in his spirits as to seem youthful, and above all, appreciative and sympathetic, or, as an old New England provincialism well expresses it, folksey.

Mr Huntington is not a society man in any sense of the word, though none the less sociable. Of simple tastes and strong domestic instincts, the serenity and comfort of his beautiful home are all in all to him. But, always buoyant and good-humored, he is ready at any time to accompany his family and take a hearty share in their social and other diversions. Wherever he is found he is the life of the company. His genial temperament and his never-failing wit naturally win for him, with the spontaneous recognition of others, a leading rôle in every party. Like most men of ample wealth, he has a city and a country residence, living during the winter months at 65 Park avenue, New York, and hastening with the first breath of summer to his homestead at Throgg's neck, in Westchester county, on the shores of the sound, where he remains until late in the fall. There, amid the stately trees, beneath whose lofty boughs the panorama of passing ships forms an unending picture, he surrounds himself with the things he loves best of all, and spends his limited leisure in unostentatious ease. Fond of country life, he expresses his taste in his strong, finely bred horses, his Alderneys and Holsteins, his thoroughbred dogs, and other stock. Loving equally well the beautiful in art, he covers his walls with costly paintings representing the best work of native and foreign artists. He is passionately fond of a good picture, and is a liberal though a discriminating patron of the arts, unhesitatingly paying a large price for what suits his fancy rather than for what the world may think about it. His collection of paintings represents the expenditure of at least half a million of dollars, and he still keeps on buying. Though modestly disclaiming everything in the way of a technical knowledge of art, and depreciating

his ability as a critic, it is nevertheless exhilarating to hear him discuss his paintings, for he comprehends and appreciates as few can the spirit of each of his masterpieces. His comprehension of human nature is so accurate and profound, and his sympathy so strong and warm, that he analyzes the ideas embodied in a picture with a clearness and vividness that are intuitive and eloquent. The creations of genius which adorn his home are not to him mere ornaments; they have a life into which he enters. His favorite among all of his pictures is a representation of two beautiful children, who, just waked up from their wholesome and untroubled slumbers, idealize the freshness, innocence, and sweetness of babyhood. "My children," he fondly terms them, and he salutes them as tenderly as though they were of flesh and blood. To children he seems scarcely older than themselves, so unreservedly does he enter into their little games and antics, even to rolling with them on the floor, if they wish. Apropos of this, his unselfish and affectionate interest in friendless boys is a notable indication of the man. They frequently call on him to ask for employment, and it is singular and pleasing to know that he will give up to conversation with them whole hours at times, when these hours have a large commercial value. Had he no sentiment in the matter, he would find it cheaper to give them hundreds of dollars, and dismiss them with a word. Of course he can find work for but few of the boys that come to him, but his talks with them have often revealed opportunities which they never dreamed of, and sent them out from his presence bold and hopeful, to take hold of whatever lay nearest to them, so long as it was honest labor. His experience and his kindly manner render him an agreeable and helpful adviser. In more than one instance has he been the means of making a useful man out of a boy with the "right stuff" in him. Where such a result has come from

his aid I verily believe he enjoys the contemplation of it more than the building of a new railway.

A boy stood before him one day in his private office while a crowd waited in the anteroom. He could not give him work; this he had told the lad, who, being destitute, far from his home in the country, and without a relative or friend in the great city of New York, saw no hope for himself save in the fatherly and sympathetic man, who, step by step, was getting closer and closer to his heart, and finding out all about him. When there seemed no alternative for him but a direct appeal for aid, for he was hungry, he said: "Mr Huntington, won't you let me have fifty cents to get dinner?" "Fifty cents!" replied Mr Huntington, with well-feigned amazement; "why, you could live in New York a whole week on fifty cents." And he showed him how he could do so if need be, and added: "If I were to give or lend you fifty cents it might ruin you. You should never borrow unless you can give good security; you can't do that. And there is nothing in the world so bad for a boy starting out in life as to depend on anybody but himself for the money that he needs and can earn. I would give you fifty cents, because you have a good face, but I am afraid to. Your worst enemy could not do you a greater harm than to give you money. If you will, you can go out and earn it, and I know you will. You want to be your own master. You want to be independent. You can't afford to owe anybody any money. You want all your strength and courage, don't you? Yes; well, charity or borrowed money would make you weak and dependent. Now, I'll tell you. As I came along this morning I saw a lot of men paving the street with cobbles. I'll tell you where they are working. You go there and say to the head man you are hungry and want to work long enough to earn three cents, and that he can tell you when he thinks you have done enough work for that much

money. He'll give you the job, surely. But there are other ways of making a start. Follow the first cart you see loaded with coal. Be on hand when the cart stops, and help to stow the coal away for whatever you can get. I like your face. You are a good, bright boy. You can get on if you will, and I am sure you will." The lad went away bold and strong, and it was not long before he was carrying, in a dry-goods box, a load of coal up to a fifth story lodging. His first job made him master of himself, with seventy-five cents to demonstrate the fact. Mr Huntington did not know just what had become of his young friend from the country until several years had gone by, when the latter accosted him one day as he was passing, and with grateful acknowledgments told him his story of substantial success already, and of flattering business prospects for the future. The moral involved was so practically brought out that some benevolent people in New York prepared a tract with this incident for its text. The good that it has done and ever will do no one can measure.

Mr Huntington is a reader of books, and has a large library of well-selected volumes. He has known how to use the leisure at his command wisely, and has made himself familiar with the best authors. It is not strange that the boy who found *Plutarch's Lives* an entertaining friend of his solitary moments should through life retain a great love for history, and learn to know intimately the great men who have impressed their personality upon the world; but it seems almost incongruous that a man who during his whole life has been engrossed in commerce should find consolation and delight in the poets. Yet such is the fact, and it affords a pleasant approach to the sunny side of this strong and pronounced character. Poems that sound the depths of the human heart, appealing to its sympathies at once tender and noble, fascinate him. Among his favorites is George Crabbe. The notes of war and strife, and the praises of valor fall upon

his ears rather indifferently; but in the babbling of the brooks, and the soft murmurings of the great fir-trees in the Sierra, among which he loved to wander alone in the earlier days of his pioneer life, there is the perpetual voice of music and song.

Like most men of marked character, he is reverential; and in the presence of nature contemplates with awe and a keen sense of his littleness these things which he cannot control or comprehend. If he has no positive religious opinions of his own, he never disputes the right of others to possess and express theirs, believing it to be wholesome that everybody should have the privilege of enjoying his own faith. Although his parents were presbyterians, he has himself leaned somewhat toward the universalists, a tendency to sectarianism influenced, no doubt, quite as much by the preacher as by scripture, for he had a profound respect and admiration for his friend Dr Chapin of New York, and enjoyed hearing him talk, because he said things that one had to remember. In other words, Mr Huntington is a man of judicial mind, a patient listener to the evidences of christianity, sympathetic in disposition, and appreciative of all who, honest in belief, make religion an actuality by leading pure lives. He is not disputatious in any regard, and least of all with reference to that which transcends his reasoning powers.

Mr Huntington calls himself unlettered, but I consider him educated in the broadest and deepest sense of the term. No collegiate course could, in my judgment, have enabled him to succeed as fully in the enterprises undertaken by him, or qualified him to fill as useful a position in life, as he has grown into by his own native force and individual efforts. Indeed, the chances are that a collegiate education, particularly a classical course, would have proved the ruin of his finest qualities, originality and independence. For the accomplishment of all the great things he has done, not only a great nature was

needed, but a mind asserting itself largely in its own way, and unhampered; in contrast with this force a mere artificial product of the schools is a lame and impotent creature.

Had his environment been suitable, he would certainly have earned success in scholarship, or any other department of life, and would have won, as in railroading, a leading place among the first men of the nation. What he has achieved is a sufficient criterion of his capability. His life affords an instance of exceptional faculties, symmetrically developed in the school of observation and experience. "Heaven helps those who help themselves," as exemplified in his life, is a well-tried maxim. It embodies, in a small compass, the results of vast human experience. The spirit of self-help is at the root of genuine growth in the individual, and as an element in American character it constitutes the strength of our nation. Mr Huntington furnishes an example of what all may accomplish according to the measure of their natural gifts, by the power of patient purpose, resolute working, and steadfast integrity, for their own proper aggrandizement, and, at the same time, for the still wider benefit of others. He must, therefore, be judged by his own standard.

There are those whose claim to distinction rests upon the place they fill in the public mind by virtue of official position. At no time in Huntington's life could he be classed with the politicians. This has been due largely to a singular absence in his mind of any desire for distinction merely for its own sake. If at any time he has been beset by personal ambition, it has been for the accomplishment of large undertakings in finance and commerce. High station in public life, in the common mind, justifies the claim to individual distinction. The discharge of public functions affords a standard of comparison among men who have filled the same office. A president of the United States may leave the impression of his per-

sonality upon the history of his country, and the measures of public policy inaugurated by him may be brought into comparison with the policies of the long line of presidents in which he stands. A senator may disclose the great qualities of his mind by originating measures of statesmanship; in short, official stations, having a direct bearing upon the affairs of all men, bring those occupying them under general observation. The fact that a man is president, or United States senator, carries with it the presumption that he possesses fitness for the office. The extent to which this presumption is fair no one knows better than Mr Huntington, for there are few notable men in the politics of the nation during the last twenty-five or thirty years whose measure he has not taken. But there are many to whom such a classification among the presumptively great is sufficient. Of one who has achieved wealth by great enterprises, as broad in their beneficence as the entire basis of modern civilization, it may be said that he has won a more solid distinction than can possibly be conferred by mere official prominence.

The history of human progress presents a constant succession of dramatic spectacles. The representative thought of any time determines the dramatic plane. The chief actors become the heroes of history; to them are committed the great rôles, and around them revolve the minor parts. Thus the history of any distinguished individual, and the times in which he achieved distinction, are so completely introactive as to lose almost entirely dramatic coherency, unless presented at a single view.

The distinguishing feature of the times in which Mr Huntington has borne so conspicuous a part was that of material development. During the past fifty years, and covering the period of his prominence upon the stage of public affairs, the American republic has grown into a vast empire of wealth and population. Its strides have been marked by a constantly advanc-

ing frontier, and vast areas have been laid under the subsiding sceptre of industry and enterprise. It will remain forever a remarkable period of our country's growth. Hereafter its progress will be by less phenomenal steps. The development of the past fifty years has produced on this continent conditions in some respects more nearly analogous to those of the older civilizations. The tidal wave of progress has already passed over the most fertile and most important areas of national domain. The social, financial, and commercial conditions of the future will be less alluvial in their character, and resemble more the granite formation of longer historic periods. The future history of our growth must supervene upon developed rather than primitive values. The past fifty years of our history will therefore, as already indicated, mark the most phenomenal period of our growth. It was a time rich in opportunities for distinction. Its history when fully written will present a succession of eras far more interesting in their dramatic action than the crimson pages which record the triumph of arms or embellish the annals of conquest. In common with all great historic eras, it will not be wanting in great personalities; men whose strong character and symmetrically rounded greatness appear as the controlling moving spirits of the time; men to whom were committed the great parts of the actual drama as the great parts on the stage are committed to the highest genius; and among these the name of Collis P. Huntington will take rank second to none.

To have filled the most exalted station among men can be of itself, however, only an unsubstantial achievement, if the virtues which led to that exaltation, as exemplified in one's acts, were confined to the mortal limits of existence. Were the indestructible forces engendered and applied by the most powerful and best man in the world re-distributed at his death, his existence would not be superior only in finite value to that

of the weakest and most insignificant of his contemporaries. True distinction is tested by the lasting and infinite quality of our acts. A rare individuality, the organism of an age, should be transmitted in its entirety as an actual and ever-acting power for good among our fellow-beings on this earth. This is an immortality upon which, being terrestrial and tangible, all may agree. If the spirit of the great actor can be breathed into a perpetual and universal monument, such as it is the highest function of the student of character to erect, and save the results of a useful life from that dissolution which no pen can arrest, the individual intelligence, the moral agent, the social factor shall outlast even the hills, for the edification and delight not only of those who personally cherish the name about which this history clusters, but coextensively also, for the help and admiration of the entire brotherhood of man.

CHAPTER III.

ROUTES AND TRANSPORTATION—CALIFORNIA.

ABORIGINAL AND PASTORAL CALIFORNIA—THE MEXICAN CARRETA—THE ERA OF GOLD—STEAMBOATING ON RIVER AND BAY—BOAT-BUILDING—COMPETITION—DISASTERS—CALIFORNIA STEAM NAVIGATION COMPANY—PROSPERITY AND RAPID DEVELOPMENT—NAVIGATION OF THE COLORADO RIVER—FREIGHTING—WAGON-ROADS AND WAGON-ROAD TRAFFIC—EARLY FERRIES AND BRIDGES.

CHILDREN of earth have no conception of transportation, and the ideas of the Franciscan fathers, who introduced beasts of burden in California, were but little in advance of them. True, they had horses, oxen, and the carreta, but no wagon roads.

Before mining was begun in California, and extraordinary requirements for transportation were called for, horses were slaughtered by thousands simply to reduce their numbers; but their value rose with their usefulness; and although the sullen-tempered and often too vicious Californian horses were less esteemed than imported stock, they became a source of wealth to their owners. When overland immigration set in, on a number of ranchos purchased by or granted to Americans were placed the superior draught animals of the United States, with the wagons which had rolled all the way from the Missouri to the Sacramento. In the autumn of 1848 caravans of ox-teams with wagon-loads of provisions, tools, and lumber, pioneered their way into California from Oregon, and were eagerly purchased for transportation by the sea-brought gold-seekers and merchant-adventurers who had cargoes for the mines. But owing to the want of improved wagon-roads, pack-animals were chiefly relied on, and particularly the mountain-scaling mule

brought a good price for his qualities of toughness and surefootedness.

While this was the condition of land traffic no communication by water could be said to exist, although Captain Sutter of New Helvetia kept a schooner of seventeen tons which he had some time purchased from the Russian American company. This launch had an Indian crew, and was used for trading purposes and also to bring letters or news from Yerba Buena. But the common carrier was unknown in the land before the advent of the gold-seekers.

The strict chronicler must not forget to mention that the schooner *Isabella*, of the Hudson's Bay company, spent eight days in the Sacramento river in 1839, sailed up to Sutter fort and afforded the natives the sensation of beholding this white-winged stranger from they knew not where, and whose mission was to them a mystery.

In October 1847 the Russian bark *Nosledních* came down from the north, having on board a small steamer which had been disjointed for the convenience of stowing. It was owned by Captain William A. Leidesdorff, who had it put together and set afloat to gather hides, and perform any profitable service. It was never properly christened according to shipmasters' customs, but was commonly known as the *Sitka*. It made one trip to New Helvetia, starting November 28, 1847, and was sunk by a southeast gale the day following its return some time in December, where now is Battery street, San Francisco. It was hauled up by oxen to the present Montgomery street; the engine was taken out and the boat altered into a schooner-yacht, which was christened the *Rainbow;* after the discovery of gold it ran as a packet on the Sacramento river.

Previous to the gold discovery at his mill, Sutter had in his service the *White Pinnace*, an open yacht-boat, rowed by six aboriginals, which in 1847–8 ran

in connection with a boat from Yerba Buena "as punctually as your Marysville boats do now with the San Francisco steamers," said a former agent of the line. The *Indian Queen* was a sloop of ten tons, commanded by Perry McCoon, which in busy seasons made occasional trips up the river. These vessels ran up the Yuba as far as New Mecklenberg, now Marysville. The Mormons in San Joaquin valley in 1847 owned a small sloop, Wimmer master, which navigated that stream; and Peter Lassen used to come down from his rancho once or twice a year in a dugout made from the trunk of a sycamore tree, and this completed the mosquito fleet of those years. The points at which the trading vessels touched were Nicholas Algiers' place, the embarcadero of Bear creek; Hardy's, at the mouth of the Feather river; Sutterville, Brazonia, Montezuma, and Benicia. In 1848–9 a wagon ran between New Mecklenberg and Daniel Silles' rancho in the upper valley of the Sacramento, which connected with the sloops, and this is probably the earliest wagon route for the use of the public in California.

The schooner *Providence*, of about 100 tons, was the next common carrier; and in March 1849 the Chilian brig *Eliadora*, owned by Sam Brannan, and the Peruvian bark *Guipuzcoana*, owned by Hensley, Reading & Co., both of a tonnage exceeding 250, ascended the river to the newly laid out town of Sacramento, where they were deserted by their crews, and left to decay. The next square-rigged vessel to ascend the Sacramento was the bark *Whitton*, Captain Gelston, of 241 tons, which in May 1849 went up with her royal yards crossed, drawing nine and a half feet of water, in seventy-two hours from San Francisco, "a feat unprecedented in river navigation," said the Placer *Times* of May 13, 1850. She carried up the first cargo "direct from the United States." Before midsummer there were as many as twenty vessels at the Sacramento landing, and from June to September a regular line of schooners plied between that point and

San Francisco. In the latter half of the year steam on the rivers began to take the place of oars and sails.

A stern-wheel scow was built at Sutter's embarcadero in September 1849, owned by Simmons, Hutchinson & Co. and Smith, Beasley & Co. of Sutterville, to run on the river above the mouth of the American. Her first trip was to Coloma, and on her return she struck a snag, and was sunk, but was afterward raised, refitted, and her name changed from *Lady Washington* to *Ohio*. The first side-wheel steamer on these waters was the property of the Boston and California Mining and Trading expedition, which incorporated with a membership of 150, each member subscribing $300. With the resulting capital the company purchased the ship *Edward Everett*, of 700 tons, loaded her with an assorted cargo, in which was a boiler, engine, and machinery, with lumber to build a small steamboat. The frame of the boat was worked out on the deck of the ship after striking the trade winds this side of Valparaiso. The *Everett* arrived in San Francisco bay July 6, 1849, and the same month, after the cargo was disposed of, went up to Benicia, where the keel of the little steamer was laid on the 13th. On the 12th of August, being completed with the exception of her boiler, she was launched, and made her trial trip on the 15th. She made three trips to Sacramento, when she was purchased by some quartz-miners from Nevada City, who transferred her machinery to their mine, where it was used to run the first steam quartz-mill in the state. The hull was used as a ferry-boat at Frémont, twenty miles above Sacramento. There has been a controversy about the name given to this steamboat. By some she is called the *Pioneer*, and by others the *Edward Everett, Jr.* She was about eighty feet long, and had a capacity of sixty tons. Her history from first to last well illustrates the American mobility of invention and enterprise.

The next side-wheel steamboat in the inland waters of California was also brought out by ship, and put

together here. She was named the *Sacramento*, and ran between that city and New York-of-the-Pacific, a town located near the mouth of the San Joaquin, and which never became distinguished. There connection was made with the schooner *James L. Day* and others to San Francisco. She was partly owned and was commanded by John Van Pelt, and her owners realized from her sale the sum of $40,000. Soon after followed the *Mint*, a small affair; then the propeller *McKim*, Captain Brenham, of 400 tons burden, which was received on her first trip to Sacramento with shouts of joy, cannonading, and speeches. The *McKim* was sent from New Orleans in 1848 via Magellan's straits, and did not arrive until late in 1849. She was sunk near Benicia in the summer of 1850, but was raised, and sent out into the ocean. She was once beached in a gale at Crescent City, but floated gently off on the next tide, and was in San Francisco before the arrival of those sent thither to report the disaster.

Closely following her career on the river came the *Senator*, Captain John Van Pelt, of 500 tons, owned principally by Lafayette Maynard, Charles Minturn, and Robert B. Minturn, which made the voyage around Cape Horn in charge of Lieutenant Richard Bache, U. S. N., arriving on the 27th of October 1849. The sluggishness of the *McKim* caused the *Senator* to be preferred by passengers. Both boats made a great deal of money. During her first year the *Senator's* net profit was $60,000 a month, with fare thirty dollars to Sacramento, ten dollars extra for a stateroom, forty to fifty dollars a ton for freight, and two dollars for a meal. These prices were lowered, a year or two later, to ten dollars passenger fare to Sacramento, and eight dollars a ton for freight.

The next boat that appeared in these waters was the *Lawrence*, brought out by a New Bedford company in November 1849, and put on the route between San Francisco and Stockton, but subsequently sold to another company, and sent up the Feather river to

Marysville. Above Feather river, on the Sacramento, was running the *Lucy Long*, named in admiration of the negro melody whose refrain was,

"O, take your time, Miss Lucy,"

and it is said that this craft, which was a flat-bottomed scow, did take her time, being nine days in making a voyage from Benicia, where she was built, to Sacramento. Her passengers having no protection from the weather, which was inclement at this season, except that afforded by a shed erected over the engine, found the excursion anything but agreeable.

Next after the *Lawrence* was the *Linda*, followed quickly by the *Gold Hunter*, 175 feet in length and 26 feet beam, with two spacious cabins and berths for 100 passengers. Conillard was her agent and Joseph Spinney master or first mate under Couillard. T. A. Hall afterward commanded the *Gold Hunter*. Steamboats multiplied with marvellous rapidity in 1850. For some time after shipping began to arrive and steamers were running to Sacramento and other towns, there were no wharves to accommodate commerce. In this exigency a barge was rented at $150 a day, and employed in lightering vessels. Such a barge was sold in 1849 for $4,000 to a company organized to land cargoes, while on the same day a large three-masted ship sold for $3,000, being of less value than the lighter. The demand requirement regulated the price.

The first ferry-boat between San Francisco and Oakland was a little side-wheel steamer—the *Hector*—Captain Brown, in 1849. The *Dolphin*, little larger than the fish it was named after, ran between San Francisco and Napa in 1850. The Contra Costa Ferry company was organized by Charles Minturn, who came out on the *Senator* as agent for her owners, and who put on the iron steamboat *Erastus Corning*, which was brought out from the east in pieces and put together here. Subsequently he had running across the bay the steamers *Contra Costa, Red Jacket,*

and *Jack Hays.* Minturn died in 1873 at which time the *Contra Costa, Clinton,* and *Petaluma* were still owned by the company he founded in 1849.

The rapidity with which boats and vessels were placed upon California waters is almost past comprehension. The *Alta* of August 31, 1849, gives the following names of sailing craft plying upon the Sacramento and San Joaquin rivers: *Kanai, Odd Fellow, Placer, Rialto, Olivia, Constellation, Felix, Iowa, Carolina, San Blasina, Adelia, Mazatlan, Empire, Eclipse, Valasco, Phoenix, Sagadahock, Elbe, Liberto, Chance, Spry, Rainbow, Alice, Veloz, Lola, Union, 6th June, Zack Johnson, Laura, Emily Jane, Louisa, Nuevo Hermanos, Milman, Plymouth Star, Mary, Charles and Edward, Diana, Sophia, Roe, Ann, Sea Witch, Patuxet,* and *Enterprise.*

The construction of small sailers was extensively carried on, and in 1850 important works for the construction and repair of boats of all classes were in operation in the suburb of Happy valley, fronting the bay of San Francisco, south of Market street. Most of the work done here was in putting together numerous steamboats, the materials for which were sent out from the east by sailing vessels. Some, however, were built altogether, except the engines, on the ground. The steamer *Tehama,* 120 feet in length, was designed and completed ready for her machinery in twenty days, and was safely launched by her owner, Captain Farwell, May 10, 1850.

Following are steam vessels employed in 1850:

VESSEL.	TONNAGE.	VESSEL.	TONNAGE.
Senator	755	Phœnix	24
Gold Hunter	435	Linda	52½
El Dorado	153	New England	21
McKim	326¾	Lawrence	36½
Hartford	251	Star	20
Governor Dana	67	Excel and Scow	8
Sacramento	38½	Ætna	19
Yuba	28	Jack Hays	42
Steamers	16.	Total Tonnage	2,269¼.

If sailing craft multiplied so did steamboats. These were chiefly at first of small size and capacity, but their number made up for any lack of tonnage. With the high rates of freight prevailing and the immense volume of traffic, it became apparent that steamers could be employed at a profit, notwithstanding the great cost of fuel and of their voyage or transportation around the Horn. Many of them indeed cleared their first cost within a year or two, for freights for short distances averaged nearly one dollar a ton per mile, and the charge for passengers was about in the same proportion.

Sea-going sailing-vessels as well as sea-going steamers ran up as far as Sacramento to unload their cargoes. In 1850 there were lying at the landings for this place the *Crescent*; the barks *Dudley, Agnes, Dimon, William O. Alden, America, Laura Snow, San Francisco, Success, Anna Reynolds*; brigs, *Forest, Christina, Ceylon, Globe, Margaret, Metropolis, Anna Julia, Crocus, G. W. Cater, Arcadian, Perfect, Quaddy Belle*; brigatines, *Wolcott, Cayuga, San Jacinto, Ruth, Samuel French, Amelia, Agate*; schooners, *Lambert, Suydam, Ada Marye, Curlew, Sarah Lavinia, Elizabeth B., Montague, E. L. Frost, E. A. Slicer, Chesapeake, Francisco, Santiago*, and *General Worth*, besides the abandoned vessels *La Grange* used as a prison, and the *Guipuzcoana, Orb, Eliza*, and *Elioden*, used as storeships. On the north bank of the river were the barks *New England, William Joy, Natalie, Ezpleta, Ninns, Perseverance, Bolton, Linda, Harriet Thompson*; brigs, *Gulnare, Sterling, Tecumseh, Sea Eagle, Hodgson, Oniota*; schooners, *Mexican* and *Eugene*, the total tonnage of all of which added to that of the steamers was 14,475.

Sacramento was in early mining times the inland metropolis of California, although as mining discoveries extended other points became termini of river navigation. Thus Stockton was the capital of the southern mines, and had its lines of vessels and steamboats. The first navigation to Stockton was per-

formed in 1848 by whale-boats belonging to C. M. Weber. These were followed by the sloop *Maria*, owned also by Weber, followed by numerous sailing-vessels, which being abandoned and dismantled in the stream, obstructed navigation to such an extent that the merchants of Stockton in February 1850 petitioned Weber for their removal, the town-site belonging to this enterprising pioneer. The first steamer which visited this port was the *Merrimac*, in August 1849, which was built in Newburyport, Massachusetts, taken to pieces and shipped to San Francisco where it was put together again. Following soon after were the *Mint* and *Maunsell White*. The *John A. Sutter*, Captain Warren, was put on the Stockton route about the same time, and was withdrawn in June 1850, having netted her owners $300,000, and while on a trip to Marysville not long after exploded her boiler and became a total wreck. The *El Dorado*, a side-wheel steamer, Robertson captain, took the place of the *Sutter*, under the same captain, charging $18 cabin passage, $12 deck passage, and $20 a ton for freight. Traffic increasing, the *William Robinson*, Charles Emmerson captain, was put upon the route in June 1850, and the *Mariposa*, Captain Farwell in July—the latter as an opposition to the two former boats, which had combined to keep up prices. Stockton merchants agreed with the *Mariposa's* captain to give him all their freight at a reasable rate if he would run regularly on this route; but their hopes were dashed by the manœuvre of the combination in putting freight down to four dollars a ton, when the *Mariposa* joined the combination and prices went up to former figures. In 1851 there followed the *Union*, Captain Thomas Seeley, in January, and the *Sagamore* in October. The latter exploded her boilers November 1, 1851, as she was leaving her wharf in San Francisco, heavily loaded and crowded with passengers, over fifty persons being killed or severely injured. On the same evening the *Mariposa* collided with the

West Point, Captain D S. Kelsey, in Suisun bay, and sank to the water level, but her passengers were safely transferred to the *El Dorado*. The *Tehama* took the place of the *Sagamore*, also reducing the fare one-third. In December the *Erastus Corning* was placed upon the San Joaquin, and the *Mariposa* being repaired resumed business in 1852. The *Erastus Corning* put deck passage down to $1.50.

The Yuba river had also its share of the early transportation business, and began it even earlier than the San Joaquin, for in April 1848 an advertisement appeared in the *California* signed by T. Cordua, to the effect that he would run monthly a "safe and commodious launch" from New Mecklenberg, to San Francisco, touching at several points along the route, which connected at the upper and with "a horse-wagon," which ran regularly to Mr Daniel Silles' in the upper valley of the Sacramento. Why to Mr Silles' does not appear, but it is fair to suppose that Mr Silles owned the wagon, and besides liking to get the monthly news from below, he made a few dollars.

The early part of the winter of 1848–9 being a dry one, and the water in Feather river very low, vessels could sail up no farther than the mouth of this branch of the Sacramento, where cargoes were landed for the northern mines. In the spring, however, heavy rains having fallen, whale-boats carried passengers up as far as Johnson's crossing of Bear river, passing over inundated lands, and a number of vessels unloaded at the mouth of Yuba river, where a city had been laid out. By July the river was again low, a launch of fifteen tons, belonging to Nicolaus Allgeier being the best means of freight transportation to Yuba City or Marysville, while whale-boats continued to carry passengers. However, in the autumn schooners which had come around the Horn went up Feather river as far as Nicolaus, and a government vessel with supplies for Camp Far West landed its cargo at the same place, whence it was carried in wagons to the fort.

The winter of 1849–50 being a season of flood greatly assisted transportation, and steamers having become sufficiently numerous to seek out all the travelled routes made their appearance at Marysville. An association called the Linda company, which came around Cape Horn in a vessel named *Linda* late in 1849, brought with them the machinery for a small, stern-wheel steamer, which was transferred to a scow at Sacramento, and the steamer *Linda* was the result, which was immediately loaded with a cargo for a merchant at Barton bar on Feather river, and made two trips before the year was out, David Hall being captain. She was soon followed by the *Lawrence*, which has disputed priority with the *Linda*, and in April 1850 by the *Governor Dana*, a stern-wheeler of about eighty tons. This boat was built by General Veazie and Nathaniel Lord at Bangor in 1849, to ply on the Penobscot river in opposition to a monopoly to which the legislature of Maine had granted the exclusive right of navigating that stream. An injunction being issued which prevented her running on this river, she was taken to pieces, and sent out to California on the bark *Rio Grande*. On being reconstructed she was commanded by W. R. Young. Such curious individual histories had many of these early steamboats.

In April 1850 the fare to San Francisco from Marysville was thirty-five dollars. On the 27th of August there were twenty-four sailing-vessels at the landing at Marysville. In the latter months of 1850 the Feather river was again low, and steam navigation was suspended, sail-boats and stages taking passengers above Sacramento until November, when the *Governor Dana* resumed business on this stream. In 1851 the *Marysville*, Captain J. A. Payne, ran twice a week between Marysville and Sacramento, and the *Miner* weekly between Marysville and San Francisco. The Union line also ran the *Confidence*, Captain J. P. Gannett, and the *Wilson G. Hunt* on the

same route. The *Hunt* was sent out from New York in March 1850, but meeting foul weather, and having to put in to the Bermudas for repairs, arrived late in the year. She was commanded by Captain E. C. M. Chadwick. In July the *Orient*, which was built in San Francisco expressly for the route between Sacramento and Marysville, started on its mission in July 1851. During the twenty-four hours previous to August 2d seven steamers with full freights were landed at Marysville, namely, *Kennebec*, *Yuba*, *Marysville*, *Maunsell White*, *Benicia*, *Orient*, and *Game Cock*. Later in August the *Gabriel Winter* ran between Sacramento and Vernon City, connecting with stages for Marysville. The *Fawn*, a small steamer, was blown up on Feather river August 16th. In November the steamer *Camanche*, owned by Captain J. A. Grant, who commanded her, and Major P. B. Reading, and which was built at Pittsburg for shipment to Sacramento, was put on the upper Sacramento, touching at Marysville. The *Jack Hays*, Captain W. Maine, was also on this route, and was the first steamboat to ascend the river to Tehama.

So crowded was the river front at Marysville that the court of sessions ordered to be prosecuted all persons who kept boats and vessels at the landing an unnecessary length of time, to the prejudice of the convenience of others. Yet in December the *American Eagle* of the Merchants' line, Captain William M. Lubbock, commenced running on the route between San Francisco and Marysville; and in January 1852 the *Urilda*, Captain Frisbie, twice a week. The *J. Bragdon*, Captain Thomas W. Lyle, also made regular trips to San Francisco, while the *Fashion*, Captain W. H. Taylor, belonged to the mail line between Sacramento and Marysville. During January and February 1852 the *Wilson G. Hunt*, *Confidence*, and *New World* were laid up for repairs.

The *New World* was one of several steamers which, like the *Hunt*, *Antelope*, and *Senator*, rounded Cape

Horn, and plied either ocean or inland waters, but was best adapted to the latter service. The commander of this boat was Captain Hutchings, and she was said to have run away from New York creditors. However that may be, she had a varied experience altogether, and has served in a number of companies in California, and as far north as Puget sound and British Columbia.

With all these steamers and many not yet mentioned crowding the California bays and rivers, all eager to secure a share, and a large one, of the golden profits, active competition must ensue. Before 1851 there was business for all, but after this period there were more steamboats than were needed to take care of the business — more, at all events, than could ask from twelve to twenty dollars a trip to Sacramento, and nearly twice that to Marysville. In 1852 the usual fare was five dollars; often it was two or two and a half, and when the strife was greatest people were invited to travel for nothing at all In May 1852 a combination was made to raise fares and freight rates. Formerly freight had been carried to Marysville for fifteen dollars a ton weight, while now a ton measurement was charged the same. A number of different "lines" under various names divided the patronage. Racing was indulged in, and sometimes with disastrous results. The steamer *R. K. Page*, while trying her speed with the *Governor Dana*, exploded her boiler March 22, 1853, killing and fatally wounding a considerable number of passengers, and all her officers and people except the bartender. She was rebuilt, and put on the Sacramento and Marysville route under the name of *Nevada*. The *Plumas*, a small steamer, owned by E. G. Davis and A. A. Redington, which appeared in August, having been built at Happy valley, was wrecked in 1854 by running on a snag in the Sacramento river, and totally lost. The *Pike*, built in San Francisco in 1853, was a larger and handsomer

vessel than any preceding it, except the sea-going steamers before mentioned.

The steamboats not already named which were employed in California inland waters in 1853 were the *Major Tompkins*, D. B. Moseby master; *H. T. Clay*, William S. Murray master; *California*, Boobar master; *San Joaquin*, William Moore master; *Santa Clara*, Warren master; *New Star*, Sampson master; *Jenny Lind*, P. E. Le Fevre master; *Helen Hensley*, Chadwick master; *Julia*, Conklin master; *Hartford*, A. J. Averill master; *Daniel Moor*, W. H. Taylor master; *New Orleans*, Wakeman master; *Antelope*, John Van Pelt master; *Free Trade*, Isaac Warren master; *Gazelle*, John Farish master; the *Gem*, *Belle*, *Cornelia*, *Thomas Hunt*, *Missouri*, *Star*, *Latona-Firefly*, *Phœnix*, *New England*, *Bute*, *Grinnell*, *Goodman Castle*, *Martha Jane*, *Boston*, *Colusa*, *Victor Constant*, *Kennebec*, *Commodore Jones*, *Georgiana*, *Ion*, *Etna*, *Libertad*, *Cleopatra*, *Eudora*, *Empire*, *Express*, *Caleb Cope*, *Willamette*, *Enterprise*, *Martin White*, *Dimon*, *Surprise*, *Queen City*, a large and fine steamer built as an opposition boat by the citizens of Marysville, and the *Defender*, also an opposition craft. Of twenty-five steamboats running on the rivers in 1853, four had an aggregate tonnage of 5,075, and a value of $1,086,000.

Of these early steamboats, hastily constructed and imperfectly officered, not amenable to law, or, if so, disregarding it at pleasure, comparatively few met with disasters. In 1850 the *Phœnix*, *Mission*, *Star*, *Martha Jane*, and *Sacramento* were snagged on the upper Sacramento, and the *Marion* had the same ill-fortune at a later period. The *Camanche* was sunk by colliding with the *J. Bragdon* January 5, 1853. Ten lives were lost, and the cargo destroyed. The steamer was raised, and being refitted was put on the line again. The *Helen Hensley* burst a flue while lying at her wharf in San Francisco, with no loss of life. The *Pearl* was blown up near the mouth of the American river, coming down from Marysville with a hun-

dred passengers on board, sixty-seven of whom were killed, and many wounded. Notwithstanding the recklessness of the times, the steamboat losses on the Sacramento and San Joaquin rivers bore no proportion to those on the Mississippi and Missouri during the same period. Greater care and improved machinery in a great measure overcame the danger of explosions, although on the 4th of April 1857 the *Contra Costa*, a comparatively new boat, burst her boiler, killing about a dozen persons, and severely wounding many others. On the 29th of September 1866 the *Julia*, in the Stockton trade, exploded her steam drum, scalding to death eight of the crew, and injuring several others. In April 1863 the *Ada Hancock*, used as a lighter at San Pedro to take passengers off to the ocean steamer, exploded, killing about sixty persons.

Other disasters were recorded which had not even carelessness, it was said, to excuse them. The *Nevada*, an opposition boat on the route to Sacramento, which was commanded and partly owned by Captain Kidd, was wrecked, it was rumored, by the connivance of the California Steam Navigation company. Another boat, the *Washoe*, took the place of the *Nevada*, and was run into while lying at the wharf at Benicia July 1, 1864, by the company's steamer *Yosemite*, her passengers barely escaping with their lives, and some of the crew being killed. In September following, having been repaired and put again upon the route, the *Washoe* exploded its boiler, causing the loss of one hundred and fifty lives. The hull was sold to the Oakland Ferry company, and converted into a ferry-boat. In October following the *Sophie McLane* blew up as she left the wharf at Suisun City, killing several persons and wounding others. On the evening of the 5th of October 1865, the *Yosemite*, in the moment of backing out from the wharf at Rio Vista, exploded her boiler, shattering the whole fore part of the boat above water, and killing thirty-four persons, chiefly

Chinamen. By the explosion of the *Pilot*, in Petaluma creek, in May 1883, twelve lives were lost, and by a similar accident to the ferry-boat at Vallejo, in 1887, about twenty-five persons met instant death.

One of the most appalling accidents connected with steamboating in the inland waters occurred in 1868, on the 4th of July, when, by the giving way of the bridge or apron between the ferry-house and the steamer *El Capitan*, one hundred persons were precipitated into the bay, and half of them drowned before they could be rescued. Thus, over four hundred lives have been sacrificed, which sufficient care and knowledge might have saved. The percentage, statisticians would assure us, is small compared to the great numbers who travel, a consolation not appreciated by the surviving friends of the lost. In 1872 the *Pioneer* was sunk by a gale in San Pablo bay, but was subsequently raised. The *S. M. Whipple* sank in the bay in 1875; and a considerable number of laden barges have met with a similar fate at different times.

The profits of steam transportation for the first two seasons were, as I have indicated, enormous, but the multiplication of boats which competed for the carrying business reduced fares and freights below a satisfactory margin of earnings above expenses, and decided the leading steamboat proprietors to combine their property in an association, which, under the name of the California Steam Navigation company, organized March 1, 1854, with a capital stock of $2,500,000.

The associates were Charles Minturn, representing the steamers *Senator* and *New World*, running to Sacramento, and the *Cornelia* running to Stockton; David Van Pelt, representing the *Antelope*; Richard Chenery and R. M. Jessup, representing the *Wilson G. Hunt*, *Confidence*, and *Thomas Hunt*, all running on the Sacramento route; S. J. Hensley, James Whitney, and William Norris, representing the *Helen Hensley*, and *Kate Kearney* running to Stockton, and the *Hartford*

a propeller running to Sacramento, the *American Eagle* owned by William Lubbock and his brother Henry Lubbock, and the *Sophia*, owned by Louis McLane, the two last named on the Stockton route; Thomas Lyle, representing the *J. Bragdon, Urilda*, and *Camanche*, which were owned by Lyle, George Barclay, Thomas Hope, and John Bosworth, and which ran when the stage of water permitted it to Marysville. The *H. T. Clay* and the *Pike* also belonged to the original company, and subsequently A. A. Redington conveyed to it the *Gazelle, Plumas, Belle, Cleopatra*, and *Gem*. John Bensley was also one of the company.

The aggregate value of the steamers represented was fixed at $1,250,000, and stock issued to the various owners in shares of $1,000 each. The entire capital of $2,500,000 was paid up before August 1859, the company having paid in scrip to the stockholders about $1,250,000 in four and a half years, besides about fifty-eight per cent cash for the same time. The first board of trustees consisted of Richard Chenery, Charles Minturn, Walter B. Minturn, H. N. Squire, R. M. Jessup, Thomas W. Lyle, R. Hope, Samuel J. Hensley, and James Whitney, Jr. The first officers were: Chenery, president; Squires, vice-president; Norris, secretary. Lyle was first agent at Sacramento, soon succeeded by Redington, who remained in this position until the disincorporation of the company. F. F. Low was agent at Marysville, and James Johnson at Stockton. The directors at different times were Charles L. Low, F. F. Low, A. A. Redington, B. M. Hartshorne, William Norris, A. Hayward, Louis McLane, Louis Cunningham, Samuel Soulé, William C. Ralston, N. C. Paddock, G. C. Bodie, William H. Taylor, Lloyd Tevis, S. F. Butterworth, and William H. Moore, who are all well-known business men of the Pacific coast. The tariff adopted by the company after some rivalry with other lines was: Passage to Sacramento, $10.00; to Stockton, $8.00; Marysville, $12.00. Meals and berths were

extra. Freight to Sacramento, $8.00 per ton; to Stockton, $6.00; to Marysville, $15.00; to Red Bluff, $50.00. Free passage was allowed to stockholders owning ten shares, but the privilege being abused by renting it to hotel runners and others, it was withdrawn.

Soon after the organization of the California Steam Navigation company the merchants of Marysville, not satisfied with the rates of passage and freight, formed an association known as the Citizens' Steam Navigation company of Marysville, with a capital of $200,000, of which $60,000 was at once subscribed, the object being to break the older combination. Its officers were: John H. Jewett, president; William Hawley, vice-president; H. Richardson, secretary; trustees, Jewett, Hawley, M. Cheeseman, M. Brumagim, Peter Decker, C. B. Macy, J. M. Ramirez, J. T. O'Farrell, and J. E. Galloway.

The first boat put on by this company was the *Enterprise*, of 120 tons, which began running July 26, 1854, the charge for freight at this time by the old company being twenty-five dollars per ton, which the competition brought down to one dollar, while its adherents supported a rate of twelve dollars by the Marysville or Citizens' line. The Sacramento company put fares down to twenty-five cents, and the Citizens' company to a dollar, both running their boats to Marysville. The temptation of the merely nominal prices caused many merchants not in the new combination to desert it for the more powerful opponent. Before the year was out the Citizens' company built and put on their line the *Queen City*, already mentioned, a high-pressure boat which was capable of a high rate of speed. In January 1855 the city of Marysville voted, almost unanimously, to subscribe $100,000 to the stock of the Citizens' company, and the explosion of the *Pearl* which belonged to the old line, the same month, gave a temporary advantage to

the new company. It was soon found, however, that both companies suffered by the too sharp opposition, and a compromise was finally effected on the schedule quoted above.

In 1855 the California Steam Navigation company subsidized the *Queen City*, and also placed on its line to Marysville the *Governor Dana*, a new boat of that name, J. S. Johnson master; the *Cleopatra*, W. H. Taylor master; and the *Sam Soulé*, Henry Gilman master. In the summer of 1858 the *James Blair*, Captain W. S. Somers, and the *Governor Dana*, Captain M. Littleton, plied between Sacramento and Marysville; in the winter there were the *Cleopatra* and *Young America*, the latter a large stern-wheel boat built by the Citizens' company, with the same commanders, which was sunk near Marysville in 1865. In 1861 the *Defiance*, J. C. Gibson master, belonging to the Citizens' company, was on the Marysville route, connecting at Sacramento with the *J. T. Wright* for San Francisco. A small steamer, the *Swallow*, was also running in this line at the same time, and in the years between 1861 and 1870 the *Banner*, *Flora*, and *Yuba City Belle* were put on this route.

In 1871 the rivalry between the two companies was ended by a transaction to be referred to presently. A new line of steamers between Marysville and Sacramento was started by D. E. Knight, W. T. Ellis, and J. R. Rideout, who purchased the California-built steamer *C. M. Small*, of 120 tons register, and placed it on the route to San Francisco, and in 1875 built the *D. E. Knight*, of 160 tons register, at Marysville. These were both stern-wheel boats and intended for low water. They are both still used as freight boats. This company own, besides, four barges which are towed by their steamers, carrying from 100 to 350 tons each. The gradual filling up of the channel of Feather river with mining debris finally rendered it impossible for boats to reach Marysville landing, goods

being deposited either at Yuba City or on the opposite bank of Feather river, where they were transferred to wagons. But in 1887–8, some time after the passage of an act by the legislature preventing miners from washing debris into the streams in certain parts of the state, the navigability of the Feather river had shown evidence of returning.

Coming back to the history of the California Steam Navigation company—it pursued a career of monopoly successfully for seventeen years. The progressive steps by which it accomplished its conquest of the water transportation is succinctly shown in the ensuing record. In 1855 the *Eclipse*, a large high-pressure steamer, was sent out from Cincinnati, and owned by Captain Lyle and others, was subsidized, laid up, and finally broken up. The *Thomas Hunt* was sent to China and there sold. The low-pressure steamer *Surprise*, sent out from New York in 1856, was purchased for $105,000 and with the *Wilson G. Hunt* sent north to make money during the Fraser river excitement. The latter remained on Puget Sound, and the former was sent to China and sold. The large low-pressure steamer *Chrysopolis* was built by the company here in 1860, her engines being shipped from New York. After running on the river for a time she was remodelled and became the ferry-boat *Oakland*, still in the service of the ferry company, between Oakland mole and San Francisco. In January 1863 the large high-pressure boat *Nevada*, built by Kidd and others to run in opposition to the California Navigation company, was wrecked at Cache creek. The same year the company built the large low-pressure steamer *Yosemite* for the Sacramento trade; but in 1864, while leaving the landing at Benicia, she collapsed her flues, causing great loss of life. This boat was transferred after being refitted to Fraser river, where she remained. In 1864 the *Washoe*, built by Captain Kidd, after running a short time collapsed her boilers, causing a great loss of life

and being totally wrecked. About 1865 the company purchased from Captain Wright the sea-going steamers *Brother Jonathan* and *Pacific*, both of which have since been lost, the former the same year and the latter in 1875; and in 1866 purchased the propellers *Ajax* and *California*, which had been used as transports during the war, and were sent out here to be sold by J. B. Dickinson. The *Ajax* ran for a short time to the Sandwich islands, and afterward in the Oregon trade, as did also the *California*. The same year the company built the large low-pressure steamer *Capital*. In the mean time the *Orizaba* and *Active* had been added to the company's fleet of sea-steamers, and in 1867 were sold, along with the *Pacific*, *Senator*, *Ajax*, and *California*, to the California and Mexican Steamship company, in which Ben Holladay owned the controlling interest, the California Steam Navigation company receiving $650,000 worth of the steamship company's stock in consideration of the sale. Two years afterward Holladay purchased the company's interest for $450,000; and in 1871 the company sold its entire property to the California Pacific Railroad company for $620,000.

During the existence of the California Steam Navigation company there was paid in dividends, in cash and stock, about 324 per cent or 20 per cent per annum; and in the final closing up of the business 45 per cent of the capital stock was paid to the stockholders in cash, being about the amount originally subscribed.

Some personal memoranda may not be out of place here. Richard Chenery resigned the presidency in 1855, when S. J. Hensley was elected. Benjamin Hartshorne was elected president in 1865, and Mr Norris resigned the secretaryship, and S. O. Putnam was elected in his place. In 1866 Hensley died. Of the captains who have passed away are John and David Van Pelt, Ned Pool, Gannett, Seymour, George Barclay, Ned Hope, Thomas Lyle, Thomas Seely,

Chadwick, Weeks, Moseby, and Clark. Of those who longer remain are living Thorne in San Francisco, Benjamin Hartshorne in New York, Spears in Boston, William H. Taylor of the Risdon Iron Works, San Francisco, and Averill in Chicago.

Of other men concerned in the company's affairs, Louis McLane resided in Baltimore; John Bensley engaged in a variety of enterprises such as water and gas companies and iron works in San Francisco, and an irrigating canal scheme in San Joaquin county, together with other projects for developing the country's resources in a practical manner. William Norris, who had been captain of a steamboat on the Mississippi, after resigning the office of secretary in the California company, became agent of Holladay's line, and finally vice-president of the North Pacific Transportation company, in which office he remained during the existence of this corporation, after which time he became secretary of the Spring Valley Water company. Others connected with the navigation companies as shareholders and directors were R. J. Vandewater, P. B. Cornwall, John Bidwell, Thomas O. Larkin, James Blair; and as captains S. P. Putnam, Robert Haley, George S. Wright, William Moore, Frank Conner, Martin Bulger, James Freeborn, Charles Thorne, Baird, Hurlbut, Lewis, Foster, Burns, Leslie, and Gorman.

That efforts were made to lessen the influence of the California Steam Navigation company upon business affairs, and how futile were those efforts, is shown by the action of the legislature in 1856, which appointed a committee to investigate the subject of corporations, and of navigation companies in particular. It was declared that the entire carrying trade of the Sacramento and its tributaries was performed by two companies, and that they charged nearly six cents per mile for first-class passage, and five cents per ton per mile for freight. Some reduction had

been made from former rates, but, contrasted with the prices charged on river boats beyond the mountains, they were still extortionate. Cabin passengers were carried 1,600 miles on the Ohio and Mississippi, and boarded and lodged for six or eight days, for twelve dollars, or less than a cent a mile. The committee therefore proposed to the legislature to reduce the tariff to three and a half cents per mile for first cabin passage, two cents for deck passage, and three cents per ton per mile for freight. It was shown that twenty-one counties depended upon these two lines for transportation, and that at the lowest estimate Sacramento paid $172,800 more on freight annually than it would pay if the rate were reduced to the committee's schedule. Multiplying this difference by the number of counties supplied would show some approximation to what they paid over and above what they considered a fair profit to steamboat companies on freight alone, while passenger fares amounted to quite as much. Dividing the whole amount thus paid by the number of persons in the counties served, it constituted a tax upon every man, woman, and child of four dollars and nine cents per annum, or divided among the actual voters of these counties, it amounted to twelve dollars and twenty-seven cents per man. "Thus," says the report, "it will be seen that twenty-one counties pay annually a tax to two corporations which amounts to a sum nearly one hundred thousand dollars greater than the yearly revenue of the state."

I quote this to show that at this early period the people had commenced their attempts against transportation companies which continued to a later period. The report referred to the fierce opposition which had attempted to break the combination, but without avail, and even named the following steamers which were laid up, being hired by the California Navigation company to lie still: *Queen City*, *Enterprise*, *Defender*, *Anna*, *Abernethy*, and *Eclipse*.

I can only state further that the suggestions of the

committee were not adopted, for in this legislature the corporation seemed to have more friends than the people? In 1860 the company, finding it an onerous burden to be compelled to purchase or subsidize all the boats which might be placed upon the rivers, set free all the tied-up steamers, and for a time freight and fares were kept at low rates by an active competition. There were at that time forty-eight river-boats completed, and four in process of construction. Of these, twenty-four belonged to the California Steam Navigation company, two to the Citizens' company, two to the Merchants' Transportation company, two to the Sauzalito Steam-tug and Water company, six to the Contra Costa Ferry company, and twelve were miscellaneous. But in 1868, when the California Pacific Railroad company desired to purchase some steamers to complete its line from Vallejo to San Francisco, it was compelled to go out of the state for them. The company, which would permit no rival in the state, did much to develop trade and improve navigation, as well as to make travel agreeable by elegantly appointed and commodious steamers, and to give employment to a large number of persons. That it might have done all this with smaller dividends its critics were agreed. For seventeen years it continued to tax the country for its three per cent a month, and surrendered at last only to a superior power.

It was a change which revolutionized some kinds of business, although the river trade being a secondary object with the railroads, the waters were free to such companies or individuals as desired to venture their means. Passenger traffic and fast freight followed the railroads, but grain and produce from the two great valleys were carried to San Francisco on the light-draught steamers or the barges which they towed, returning laden with merchandise. A new California Steam Navigation company, with headquarters at Stockton, seeks to monopolize river trans-

portation in these days, but its history will never resemble very closely that of the original.

California has few rivers navigable for any great distance except the Sacramento and San Joaquin, and few inland bodies of water besides. An attempt was made to relieve the wants of the miners of San Joaquin county, after the great flood of 1861–2, when the state of the country roads was such that no communication could be had with them by land. Flour was at a dollar a pound in the mines, and merchants were anxious to take a cargo up while prices were high. In this emergency D. J. Locke, of Lockeford, on the Mokelumne river, went to San Francisco and chartered the *Fanny Ann*, commanded by John Haggerty, a steamer 110 feet in length, which he loaded with supplies, and despatched February 12th, with orders to take two weeks if necessary in reaching his town. The *Fanny Ann* met with no serious obstacles in ascending the Mokelumne as far as Woodbridge, a town owned by a Mr Woods, who, wishing to fix the head of navigation at his place, made such representations to Haggerty that he was induced to unload at Woodbridge, and when six days still remained of his allotted time turned his back on these perilous waters and returned to San Francisco. But Locke was not the man to give in to such impediments, and going a second time to San Francisco, he purchased a steamer on condition that it should go to Lockeford. Loaded with fifty tons of freight and sixty passengers, the *Pert*, Captain Allen, made the trip successfully, and was welcomed with loud plaudits at her landing. A company was soon formed, consisting of D. J. Locke, George D. Locke, Edwin Foster, and James Tallmadge, called the Mokelumne Steam Navigation company, which purchased the *Pert*, the *O. K.*, and the *Mary Ellen*, which continued to ply on this river, although not always able to ascend to Lockeford. Out of the success of this organization grew the Mokelumne River Improvement company in 1865,

whose members were the steamboat owners and others, and whose capital was eight hundred shares, representing $40,000; the benefits to be the right to collect ten cents per ton on all freight which passed on the river; and to entitle them to collect this tax for twenty years they were bound to clear the river for a certain distance, and within a given time. This they did, and collected their tolls, having one suit at law, but maintaining their right, which expired in 1885. But long before the twenty years had passed, circumstances had so altered that there was nothing for the Mokelumne Steam Navigation company to do. The mining population whose wants first stimulated its founders to the effort has passed away, a railroad now carries freight as well as passengers, and there is nothing left worth contending for, while the *Pert*, the pioneer in the company's service, lies dismantled, sunken, and filled with sand at Staples' ferry, at the crossing of the old trail from Stockton to the southern mines.

Lake Tahoe is the only inland body of water on which steam navigation is used, and that only since 1873. On the bay of San Francisco ply unnumbered steam craft, running to the numerous minor bays, inlets, and creeks which surround this magnificent harbor. They help to make up the great sum of transportation, but individually they are without any interest.

The Colorado river, owing to its wildness, and its position on the southeastern border of the state, and being without settlements on either bank until more recent years, has been slow in coming into repute as a navigable stream. It is, nevertheless, a most interesting river, with a not insignificant history, and it will continue to influence commerce throughout this section more and more as the centuries roll by. Born in mid-continent, and interlocked with the Platte, the Arkansas, and the Rio Bravo del Norte by its eastern

branches, which drain the northwest portion of New Mexico under the name of Grand river, its tributaries on the north which form Green river intertwine with those of the Yellowstone and other branches of the Missouri, and with the Snake river branch of the Columbia. After receiving the Grand, it flows through a desolate land, and enters a cañon hundreds of feet in depth and more than a hundred miles in length, with abrupt walls of rock for long distances, and where the force of the current dashing against them grinds into smallest fragments any trunk of tree which the floods of spring may have washed down from the crest of the continent into its upper waters. Issuing from this chasm, it flows more than four hundred miles through an arid country, with but one tributary, the Gila, something over a hundred miles from the gulf of California. After receiving the Gila, its course is through a valley which is five hundred feet lower than the level of the sea, and which evidently was once a portion of the gulf into which the river debouches, but is now a hot and waterless desert, except in seasons of heavy rains, when the river overflows its self-made dykes, and forms here and there a bayou, the largest of which has been mistaken for a river, although it flows from instead of into the Colorado. Its shores are apparently simple mounds of sand or mud, with gullies between them, making the country adjacent to the river entirely impracticable for roads, and the river itself impossible to be bridged, except at a few places at long distances apart. The mountains in the lower Colorado region rise abruptly from the plains, resembling large dykes, terminating at top in sharp ridges, which a man could bestride as he would a horse's back. The current of the Colorado is swift, and the water in the dry season shallow; in the rainy season it is a rushing volume of red mud, resembling, except for its greater liquefaction, the country through which it flows bank-full, the strange, uncompleted appearance of the treeless

landscape suggesting the world just after the Noachian deluge. Its entrance from the gulf is obstructed by an island parting its waters, which here also meet a tidal wave nine feet in height which causes the current to set in on one side with great velocity, and to ebb with equal force on the other; the narrow channels and the contrary currents making it most dangerous ground for sailing-vessels. Such are some of the natural features of this wonderful stream, one of the four great rivers of the North American continent and the least attractive of them all to the navigator.

Fernando Alarchon, who discovered the river in 1540, ascended it with twenty men in two boats 255 miles, according to his account, but possibly farther, as he alleges that he came to where the mountains through which the river ran made it impossible to draw the boats, which could only be at the great cañon. The navigator describes the narrow escape from destruction which threatened his fleet of three vessels at the mouth of the river, and other explorers later vainly attempted to stem the powerful current at the entrance.

About 1828 or 1829 Lieutenant Hardy of the British navy, connected with a pearl-fishing company in the gulf, surveyed the entrance and ascended the river for ten or more miles, having a perilous experience. The tide running at the rate of nine miles an hour threw his vessel on shore, where she lay for eight days, being left on one occasion 150 feet from the water, the flood and ebb tides having the same velocity and impinging upon each other, "boiling up full eighteen inches above the surface, and roaring like the rapids of Canada."

Following the conquest of California and the close of the Mexican war, the different military expeditions and the immigrations which followed the gold discoveries familiarized the American mind with the crossing of the Colorado, and no more. This was

established at the junction of the Gila, where the road from the Rio Grande near El Paso touched the Colorado, and where the nature of the ground was favorable. It was here that Fort Yuma was established by Major Heintzelman in 1850—a mere camp then—for the protection of the immigration, and the problem of how to supply this post was that which suggested the effort to navigate this river.

Camp Yuma was situated upon the bottom land near the crossing, but Fort Yuma, constructed a little later, was located on a rocky elevation at the junction of the two rivers, and about seventy feet in height, through which the united rivers have forced their way, although it would have seemed more natural had they flowed around the obstruction, which is of no great extent.

Camp Yuma, which was abandoned during 1851, had at first to be supplied by land from San Diego at an enormous expense; but in June 1852 the letting for the transportation was given to contractors at Benicia, who proposed to take the route by the gulf and river at $120 per ton for the first cargo, and $50 for all that was required during the remainder of the year. The schooner *Capacity* was loaded with stores, and reached the mouth of the Colorado in safety. From this point a steam-tug was employed to tow lighters up to the camp, which was, however, unable to reach that point on account of the low stage of water; and the stores had to be landed, and conveyed in wagons from the lighters to the fort at almost as great an expense as if they had come all the way from San Diego on wheels.

In the mean time Heintzelman and Sackett, of the Colorado Ferry company, had made a survey from the Gila to the gulf, and pronounced the river navigable, and the United States schooner *Invincible* had ascended it for a distance of thirty miles; and it appeared from all the observations taken that the river was subject to great changes of volume, and

that at one season it might have ample water, while at another it had not more than three feet in the channel at no great distance from the gulf.

By degrees this incertitude disappeared before the determination of enterprising men, and in the spring of 1854 George A. Johnson and company placed a small steamer, the *General Jessup*, on the river between the gulf and the fort, carrying freight or towing government schooners to and from such points as they could reach and the waters of the gulf. The *General Jessup*, commanded by Johnson, had an engine of twenty horse-power, and drew only sixteen inches of water, although 105 feet long and with side wheels.

Having settled the question of the navigability of the Colorado to Fort Yuma, efforts were next made to determine what use could be made of the stream as far up as the Rio Vírgen, which was crossed by the old Spanish trail from New Mexico via Salt Lake to Los Angeles. According to the testimony of a trapper, Antoine Leroux of New Mexico—who in 1837 descended that portion of the river in skin canoes, until he reached a place where he found timber, when he made wooden ones—there was nothing to prevent a small steamer from navigating it, the most shallow part having from three and a half to four feet of water in January, which is the season of low water, when the mountain streams that feed the river are frozen.

Captain Johnson had meantime interested himself in getting the legislature of California to instruct the delegation in Washington to attempt to procure congressional action in the matter of official exploration of the Colorado, or an appropriation to cover the expense of a semi-official survey by Californians. Johnson even went to Washington to urge the importance of the subject upon the attention of the secretary of war. As a result of these importunities an expedition was set on foot in 1857 intended to settle the question of the navigability of the Colorado,

under the command of Lieutenant J. C. Ives of the United States Topographical engineers. An iron stern-wheel steamer forty-five feet long, drawing thirty inches of water and capable of running ten miles an hour, was built in Philadelphia for this expedition. It was brought across the Isthmus at a cost of $7,000, and on arriving in San Francisco was reshipped on board the government transport *Monterey* for the Colorado river, which was ascended a distance of seventy-five miles to the head of navigation for sailing-vessels. Here the material of the steamer was landed and put together in sixteen days, when it was named the *Explorer*, and started December 31st for Yuma, carrying the freight of the expedition. The officers of the exploring party after Ives were J. S. Newberry, geologist; F. W. Egloffstein, topographer; C. Bielawski, hydrographer; Mollhausen, naturalist; P H. Taylor assistant topographical engineer; and C. K. Booker, assistant surveyor. A steamboat engineer and a number of men composed the remainder of the expedition, which was until the 11th of March 1858 in reaching the Rio Vírgen, "beyond which it was impracticable to proceed in boats." A portion of the party were sent back to Fort Yuma, striking a rock in the descent, while the explorer proceeded by land with a pack-train to examine the country on the upper tributaries of the river.

The report which he made in November 1858 was on the whole favorable, and helped to an understanding of the peculiarities of the river. He paid a just tribute of praise to "the enterprising company which for three or four years had been transporting government stores in steamboats from the mouth of the Colorado to Fort Yuma, whose persevering energy had so far succeeded in overcoming the natural difficulties of the navigation as to enable them to perform their trips with entire regularity and certainty."

On the 31st of December, the day on which Ives commenced his steamboat voyage seventy-five miles

below Fort Yuma, Captain Johnson, president of the company referred to, set out from that place in the *General Jessup*, with thirty-five men, fifteen of whom were soldiers under Lieutenant White, detailed to escort Johnson's expedition. The party ascended the river without accident as far as Beale's crossing of the Colorado, about where Fort Mojave was once situated, and where is the present crossing of the Atlantic and Pacific railroad. From here the expedition after examining a cañon thirty miles in length returned down the river. They encountered at the end of the first day Lieutenant Beale with an escort of fifty dragoons whom they ferried across, and 160 miles above Yuma met Ives' expedition. When within fifty miles of Yuma the steamer struck a rock and sank in three feet of water. Johnson proceeded in a skiff to the fort and, taking a working party back with him with the necessary appliances, had the *General Jessup* afloat again in two days.

One result of these expeditions was the ascertaining that there was a considerable amount of excellent land in numerous valleys, though of no great extent, situated laterally to the river as well as in the bottoms of the Colorado itself. The Mormons of Utah had extended their settlements down to the Rio Vírgen, farms had been opened in the neighborhood of forts Yuma and Mojave, and increased transportation was demanded, not only immediately upon the river, but to accommodate the interior of Nevada, Utah, and Arizona.

In 1864 Samuel Adams of the latter territory visited San Francisco to endeavor to direct the attention of commercial men to the necessity of further explorations of the upper Colorado. The only person who gave much heed to his suggestions was Thomas E. Trueworthy, who purchased a steamer with his private means, and entered upon the business of transportation on the river, running his steamer, the *Esmeralda*, and towing freight barges as far as Collville,

a short distance below the Rio Vírgen, and 200 miles above Fort Mojave, or 600 miles from the gulf, while from Collville to Salt Lake City was only 350 miles. Surely this was an achievement deserving of honor; and so thought the legislature of Arizona, which in 1866 passed a resolution of thanks to Captain Trueworthy, "for his untiring energy and indomitable enterprise in opening up the navigation of the Colorado river, the great natural thoroughfare of Arizona and Utah territories." The California legislature also two years afterward complimented Trueworthy, and instructed its senators and representatives to endeavor to obtain aid from congress in perfecting the navigation of the river.

Nor was this an idle demand. The surveyor-general of California and the surveyor of San Diego county had in their reports to the legislature more than once assured that body of the mineral wealth to be found in the Colorado and Gila region. Private exploration and capital had in a measure developed it. In 1862 there was quite a fleet of schooners and light-draught steamboats and barges engaged in carrying freight to and on the Colorado river. In 1866–7 the Salt Lake trade, said the Arizona *Miner*, employed between six and eight millions of dollars in capital, and required for its handling nearly 6,000 men, with 5,000 wagons, and mules, horses, and oxen innumerable, while the freighting business carried on with San Francisco was worth a million and a half yearly, besides a considerable trade by way of San Bernardino; and still the transportation was inadequate, goods and ores lying for months on the banks of the river awaiting shipment. The magnitude of the continually increasing commerce with the great basin, of which the Colorado was the natural outlet, called for the aid of government to afford relief to its plethora.

The first corporate company to be formed for transportation on the Colorado was the Colorado Navigation company. It owned three light-draught stern

wheel steamers, namely, the *Colorado*, *Mojave*, and *Cocopah*. The second was the Pacific and Colorado Steam Navigation company, organized in June 1865, which grew out of the enterprise of Captain Trueworthy, and which made Collville the head of navigation. The capital of the company was $200,000, divided into 4,000 shares at $50 each. The trustees of the company were George S. Marvin, James Linforth, C. S. Hobbs, George Plummer, J. N. Risden, J. W. Store, and K. C. Eldredge. It owned the steamers *Esmeralda* and *Nina Tilden*, and the schooner *Victoria*. Both the companies transported all their heavy freight in barges towed by their steamers. The steamers received their freight at Fort Isabel, their stopping-places being Fort Yuma, Castle Dome, Eureka, La Paz, Williams' Fork, Fort Mojave, Hardyville, El Dorado Cañon, and Collville, all small villages or trading-posts, where the miners of the surrounding region came for supplies. In 1867 the Pacific and Colorado Steam Navigation company reorganized as the Arizona Navigation company, the following San Francisco capitalists being interested in it, namely, J. W. Stow, R. G. Sneath, Albert Dibble, and Hobbs and Gilmore. Merchants and manufacturers of this city subscribed toward increasing the facilities of a regular trade with Utah and Arizona by further surveys of the river. In the autumn of this year the Mormon church ordered a community of thirty families to settle on the Muddy branch of the Rio Vírgen, and gave other evidence of interest in the promised increase of transportation. The rapid advancement of the Central Pacific railway about this time, pointing out to the merchants of Salt Lake and San Francisco the future route of transportation between these two cities, operated as a check upon the enthusiasm necessary to carry forward undertakings of an uncertain result.

It happened also that in September 1867 the question of the possible navigation of the great cañon above

Collville was settled by an accident. A party of three prospectors from Colorado City, in the territory of Colorado, were exploring for gold on the San Juan river in the southwestern part, when they were attacked with such suddenness by a party of Indians that their leader, Captain Baker, and all their mules were killed at the first fire. The other two men seized as quickly as possible their lariats and a few pounds of flour, and ran toward the river, where they hastily constructed a raft, to which they as hastily and unthinkingly committed themselves for a voyage down the San Juan, which brought them into the Colorado river. On the third day one of the men, George Strobe of St Louis, was washed off and drowned, and the flour being lost at the same time, the sole survivor was left without food. He immediately lashed himself to the raft for greater security, and it being impossible to return, allowed himself to be borne along with the current, which carried him entirely through the dreaded cañon, from which it was impossible after entering to escape. In passing over rapids he was several times nearly drowned, and for seven days he had no sustenance except that derived from chewing the leather scabbards of his hunting-knives, nor any rest except when he tied his craft to a projecting rock in some bit of slack water for a little sleep. When he arrived at the mouth of the Rio Vírgen he was pulled ashore by some Indians, who robbed him of one of his pistols and a hatchet, and sold him some dog-meat for his other pistol. He was unable to stand erect; his hair had changed to a yellow-white color, from being constantly wet; his lower limbs were "one solid scab from his feet to his hips," and although still a young man, he appeared to be seventy years old. Such was the wretched plight of James White, of Panosha, Iowa, the first white man to navigate one of the upper branches and the grand cañon of the Colorado. From his account of the rapids in the cañon, all thought of its ever being made passable for steamboats was aban-

doned, if any had ever been seriously entertained. A few years later the carrying trade of the gulf of California and the Colorado river fell into the hands of the Southern Pacific railroad company, under the name of the Colorado Steam Navigation company. As river navigation on our western seaboard must always remain limited, let us hope that good use will be made of this stream.

I will follow steamboating with freighting, since that is its natural sequence. I have mentioned that goods as well as passengers arriving at San Francisco by sea before the era of steamboats were conveyed to up-river points as near to the mines as it was possible or convenient to go in whale-boats and ship's launches, or on board barges impelled by oars and sails, Sacramento, Stockton, and Marysville being the chief distributing entrepôts. A passage to Sacramento in the ante-steamboat era cost from $50 to $200, notwithstanding the passenger assisted if required in propelling the vessel against the stream. Fares to places about San Francisco bay were as high as $30, and freight was $50 per ton to Benicia, while from eighteen to thirty-six hours were consumed in a single trip, the risk to life being almost the same as when the padres used to be ferried across to San Rafael on rush balsas.

While people poured into California from the sea, armies of pilgrims to the Mecca of Mammon were toiling painfully in straggling columns from the Missouri to the Sacramento with every summer. They suffered as all great migrations have suffered, from the date of the Jewish exodus from Egypt or the flight of a whole Tartar tribe from a more recent despotism. Weakened by famine and decimated by disease, the graves of those who perished by the way and the bleaching bones of overworked oxen served as milestones for those who next year trod in their wake. Still they literally planted civilization as they went,

for they left a narrow belt of flowering plants and familiar dooryard weeds from the Missouri to the Sierra. Wherever the wheels of their heavily laden wagons broke the tough prairie sod there sprang up the homely witnesses of their passage. Whence came the seed? Are there certain plants that, like certain insects, the house-fly and the bee, follow as a consequence men's earth-conquest?

The native Californian must have been as indignant as he was surprised at this irruption of another nation into the midst of his hitherto slumberous land, but his indignation availed him nothing. They were here, and a more energetic, restless, migratory mass of human beings never yet peopled any country. Young and intensely alive but not perennial, alas, as testified by the nameless graves on many a hillside, they rushed hither and thither after every ignus fatuus floating on the rumor-laden air; and many fell stricken by illness which at home would have been easily subdued, but which here was fatal from lack of treatment and care. Each had his little story, often highly dramatic. He had braved the perils of the sea or encountered the dangers of the wilderness to court the fickle goddess, while mother, wife or sweetheart waited at home for the fruition of their hopes and his. The widowhood that these too often rudely broken dreams entailed upon the nation was but little less than that inflicted by the civil war ten years later. It was the first general disruption of home circles since our government was formed, the effects of which are destined to reach down to distant generations, counteracting much of the good which has resulted from these two great events in our history.

As I have said, land transportation in California previous to and during a part of 1849 was conducted almost altogether by means of pack-animals and riding-horses. In 1850 there was an improvement consequent upon the large number of draught animals and freight or farm wagons introduced the year pre-

vious across the plains. In the mountains, for lack of roads, mule-trains continued to be used until that want was supplied a few years later. But whether a mule-train or a wagon-train performed the service, it was excessively costly to the owner of the goods who had just paid the extraordinary charges which were imposed upon him by the navigation agents. One merchant relates that he paid in ten consecutive days $65,000 in gold-dust for the transportation of goods from Sacramento to Coloma, his freight being principally flour and pork carried in wagons. What wonder that since the merchant was anxious to make a profit, flour was $1 and $1.25 per pound; pork, $1.50; boots two ounces of gold-dust, and blankets the same. The charge for packing goods from Coloma to the different bars on the river was from 50 cents to $1 a a pound. Certainly no country ever paid out so much for transportation as California.

It would be a difficult matter, an impossibility indeed, to give any statistics or well-arranged facts concerning pack-trains and wagon-trains. A distinction, however, should be made in one respect. Packing might be, and was, taken up as a means of acquiring money by any one, from a Mexican muleteer who was perfectly au fait of this business, to the graduate of an eastern college, who turned from unprofitable and uncongenial labor in the mines to the profitable if disagreeable business of transporting goods from some river port to the diggings where they were to be exchanged for gold-dust. Men occupying positions of honor and trust to-day, or possessing hundreds of thousands, if not millions, can relate personal experience gained when he packed from Stockton to the southern mines, from Sacramento to Coloma, from Yuba City or from Marysville to the northern mines, and so on.

The Mexican trains were altogether the most picturesque in appearance, the tinkling bell of the lead mule, the jingling spurs of the Mexican guard, dressed

in the never-failing sombrero, serape, and gay-colored sash, with a little armory of weapons in his belt to warn off Indians and highwaymen, and the general air of being to the manner born which no American was ever able to assume. The college-bred young man might wear a broad-brimmed hat, but it gave him a disreputable air, like that of the cowboy of a later period; he might go well armed, but it was at the risk of looking like the outlaw he would avoid; and his clothing instead of imparting any grace to his appearance had a look of having been picked up helter-skelter from the débris of a fire or the flotsam of a marine accident. But it was no matter—there was money in it if he escaped accident, which as a rule he did, although the roads were bad enough in the rainy season, and the crossing of streams dangerous.

Take, for example, the firms in Marysville that were engaged in packing in 1853: Boardwell & Co., Cummings & Myers, Clark, Wagner & Stickney, Carr & Co., Frank Drake, Benjamin Drake, Dean & Co., J. W. Easterling, Ferdinand & Gustavus, Fletcher, Gordon & Co., Hurd & Hubert, James Hutchinson, Jackson, Johnson & Hicks, Johnson, Keiler & Brock, Long & Co., Lloyd & Co., Love & Co., Mayot, Fox & Co., M. Myers, L. R. & E. J. Magee, Reuben Russell, Root, E. Slossen, Tipton & Lloyd, Tainter & Hewitt, William Tell, Hiram Utt, W. C. Vineyard, and twenty Mexican owners of mule-trains. The whole number of mules owned in Marysville, and which were packed there for the surrounding mines, was over 4,000, and the wagons employed in transporting merchandise over 400, with their teams of from two to six horses, or perhaps oxen. Think of what the railroads have relieved us in the feeding and caring for such vast numbers of animals.

The wagoner was a different sort of person from the packer. He was neither Mexican nor college man out of place, but a plodding westerner, who had crossed the continent, and who understood freight-

ing pretty well from experience. He was dressed in rough but comfortable costume, was sunburned and covered with dust, walking along beside his team, or mounted on top of a high load, driving six-in-hand with a loose rein. At night he encamped beside a spring or a stream, and having attended to the wants of his team, brewed himself a pot of strong coffee, toasted a flitch or two of bacon by the camp-fire, which he ate contentedly with his bread, and having refreshed himself thus rolled himself in his blankets and turned his face up to the stars, sleeping soundly with his pistols within reach of his hand. He was seldom molested, for he did not carry much gold. He led a not altogether enviable life, breathing the incandescent dust, indulging in classic oaths, yet saving a good income out of his transportation contracts, which he afterwards invested in cattle, or applied to a toll-road, a ferry franchise, or a farm, as became a useful citizen.

This form of transportation continued, and was modified by circumstances. The wagoners of 1850–3 remained no longer in the business than was required to start them in some other, as just suggested. Later, when communities grew more fixed, there arose a class of freight contractors who carried merchandise from the river ports to the interior towns, making it a regular business, and being provided with great wagons, carrying from 8,000 to 12,000 pounds, and hauled by from four to eight spans of large mules. Not infrequently a train of two of these immense wagons was hauled by a single one of these multiple teams, and the streets of the mountain towns were daily crowded with both. Dragging their slow and stately length along, they passed on to supply the wants of some more distant community, the stout mules, each with a string of jingling bells arched over his collar, and wagging his gratified ears, as much as to say he was honored to belong to his owner's responsible firm. To admit of this system the roads were necessarily kept

in excellent condition, and were mostly toll-roads. On the mountain grades turn-outs were provided, where teams going in one direction could draw aside to permit the passage of those going in the opposite direction, or where they could await the passage of the United States mail, whose punctual appearance could be calculated to a few minutes, and whose gait, as the six-in-hand swung rapidly around the sharp curves, would have rendered a collision decidedly sensational. Here the chimes of little bells were useful, and these with the jangling of trace-chains echoing around the cliffs gave a note of warning to all within hearing to look out for a safe place to pass, and made a civilized sound in the shady dampness of the deep defiles.

The capital invested in wagon transportation in California before the advent of railroads was large. The wagons were California-made, and cost from $800 to $1,500. Many of them measured six feet in depth on the inside, twelve feet in length on the bottom, and seventeen feet on the top from front to rear. A good harness for the team would cost from $300 to $600. The value of a pair of mules would range from $500 to $1,000, and a six-span team, the ordinary amount of power required on the mountain roads, would therefore cost from $3,000 to $6,000, making a single outfit cost at the most moderate estimate between $4,000 and $5,000, and often twice that sum. At the tail of the great wheeled barge was frequently an ordinary farm wagon filled with provender for the team, and the matter of food for the animals employed was no slight item of expense. It is not surprising, then, that the prosperity of a town, county, or mining district was reckoned a good deal by the number of freight contractors doing business within it.

When the silver discoveries in Washoe created a necessity for organizing a new state, the whole transportation above Sacramento was performed by wagon. The new state was peopled, fed, clothed, and furnished

with mining machinery by such means as I have described, moving in endless procession, and with infinite toil, until such time as railroads came, not to the relief of men and beasts, but to push them farther back into still newer regions, where the same service was rendered, if at reduced compensation; for the heavy freight wagon still groans along the weary wastes of Nevada, and is familiarly known in the mid-continent territories.

Some of these merchant caravans have made journeys well worthy of being recorded in history. In the earlier days of Los Angeles county trade Phineas Banning despatched a train of twelve fifteen-mule teams, carrying goods from Wilmington on the coast to traders as far east as Salt Lake; but, owing to the hostilities existing about that time between the Mormons and the gentiles, this commerce was abandoned. Again, in 1866, a large merchant train travelled the road opened by the Mormons of San Bernardino to and through Utah to Montana, a distance from the coast of more than 1,000 miles.

Lieutenant Beale, in his expedition across the country in 1857–8, had a caravan of fourteen camels, each animal packed with provisions and military stores. With this load they travelled from thirty to forty miles daily, and could subsist in the most barren country, going for a number of days without water. Camels were at one time introduced into Nevada as freight-carriers, and it is said they throve well; but our horses could not become accustomed to them, always taking fright, and their use was in consequence abandoned.

And this brings me to consider wagon-roads, without which, obviously, there could be no considerable wagon transportation. Among the first acts of the legislature of California was one providing for the construction of public highways. Special acts followed at subsequent sessions. Among the first of which we

hear was a plank road from San Francisco to Mission Dolores, according to an ordinance passed November 18, 1850, by the city council, and ratified April 5, 1851, by the state legislature. Santa Cruz and Santa Clara counties were authorized about the same time to construct a wagon-road across the Santa Cruz mountains, between the town of that name and San José, the work to be done by contract, and paid for out of a fund provided by a special tax upon real and personal property, not to exceed one quarter of one per cent. But this road was not completed before 1857.

County governments were expensive, and with the best designs the people found it impossible in their municipal capacity to construct and keep in repair highways at all commensurate with the requirements of travel. Between the principal towns the original trails by constant use came to be passable for wagons in the dry season, but not being graded and protected by drainage, were often in the rainy season covered with water, and a slough of despond to the unlucky traveller. At such times the cost of goods as well as of transportation rose to fabulous prices. It was here that private enterprise afforded relief, and literally bridged the chasm in the way of trade. Sometimes it was the miners who resolved to free themselves from the extortion practised upon them, and at others the work of a company which designed to enrich itself at the expense of the freighters. In the end the expenses came out of the pockets of the consumers.

I find that in May 1850 the miners at Coloma cut out a road from that place to Georgetown, employing seventy men at eight dollars per day. A bridge was erected across the south fork of the American river by J. T. Little at an expense of $20,000, from which he collected tolls at the average rate of $250 a day. I find, also, that an obliging legislature in 1852 authorized James L. Freaner to construct a wagon-road from Sacramento valley to the Oregon line, and to

collect tolls on the same at the following rates: for every road wagon, five cents per mile; for every coach or mail wagon, eight cents per mile; for every draught animal attached to any vehicle, one cent per mile; for every pleasure carriage, six and a quarter cents per mile; for horses or mules with riders, two and a half cents per mile; for all loose horses or cattle, one cent a head per mile, and the same for sheep and other small stock. In addition there might be charged and collected at each bridge or ferry necessary to be used across the Sacramento, Pit, or Klamath rivers, not to exceed $2 for every road wagon, $3 for every coach or mail wagon, 50 cents for every animal attached to a wagon, carriage, or coach, $2.50 for every pleasure carriage, $1 for every horse or mule with a rider, 25 cents for every footman, and 25 cents for every head of loose stock. The motive for this overcharge may perhaps be found in a section of the act devoting five per cent of the receipts from these tolls, after the first five years, to the replenishing of the state treasury.

The same legislature authorized a company, consisting of fourteen members, to construct a wagon-road from the Sacramento valley to Humboldt bay; but in this instance the tolls were about half the amount authorized in the former act, although five per cent was made payable to the state after the expiration of five years, as in the first case. Even greater abuses were practised with legislative sanction, as when the Sacramento and El Dorado county road to Washoe was so covered with exactions that it cost the wagoner with a six-horse team $5.50 one way and $3.25 the other; or with an eight-horse team, $7 50 on the up grade One dollar of this was charged by the counties, which constructed twenty-eight miles of the road, and the remainder by two companies, which had obtained authority to lay out two branches or turn-outs of five and twelve miles respectively, possessing some advantages over the old road. It must be admitted that $2.50 for the drivi-

lege of driving over twelve miles of a dirt road was an extortionate charge to be made in 1862, when it might be supposed that the disposition to commercial robbery was somewhat abated in the people. Yet the wagoners paid the tolls, and do not appear to have complained. The legislature in its road laws first ordered that in certain counties half the fines collected for selling liquor to Indians should be applied to road-building, and in others that a special tax, not to exceed four dollars, should be levied, and finally hit upon the plan of authorizing the counties to pay for their roads by collecting the tolls, not to exceed three per cent a month upon the cost of construction, and commissioners being appointed to adjust these matters.

In the valley portions of this state plank roads were early advocated, the most important of which was one from Nevada City to Marysville, and another from Sacramento to Nevada City, via Auburn and Grass Valley, in 1853, which projects finally failed. The country being for the first ten years occupied with the immediate necessity of getting money, which it spent again in a free-handed manner, not looking to the importance of putting some of it back into the improvement of commercial facilities, showed really very little interest in its roads. It required, indeed, more than the first decade to wear off the feeling in most minds which each person secretly cherished, that he was going back to "the states" when he had made a little more money. Only the actual settlers upon lands and those who were compelled to travel unimproved trails, miscalled roads, felt any interest in the matter.

From this general charge of indifference must be excepted that part of the subject which related to the mountain trails leading into California, by which the annual immigration entered the state. A common sentiment of humanity as well as a regard for the best interests of the state or of individual counties, or even

persons, suggested the necessity of improving one or more of these roads.

Few who have not beheld them can conceive of the difficulties to be overcome in making a wagon-road over the Sierra, whose frequent ravines and awful chasms intersect the general course or turn it completely aside. These cañons have a depth of from one to two thousand feet, and above their banks tower majestic ridges of equal height. For instance, taking a direct line in Placer county from Bear river to the middle fork of the American river, in a direct distance of eight miles the cañons to be crossed aggregate 6,000 feet of rise and fall; and in the higher portions of the Sierra the chasms are of still greater depth, if not frequency.

The general configuration of the mountains is, however, that of a mighty dorsal column, with ribs running off into the valleys on either side. Rising out of it at intervals are lofty peaks, and between these are summits more or less level. When one of these is found with a rib, however, broken leading down to the plains, it becomes a pass. The passes of the Sierra Nevada, unlike those of the Rocky mountains, are narrow, and approached with difficulty.

The first wagons which came into California entered by the Walker pass in 1843. The train which crossed the Rocky mountains by the South pass turned southwest from Fort Hall, and travelled the Humboldt route to the eastern slope of the Sierra, keeping down along the base to the headwaters of Kern river before finding a passage into California. The second entered in 1844 by the Truckee pass three and a half degrees farther north, and in 1845 and 1846 others entered by the same route. In 1847 a party crossed the Sierra by the head of the Humboldt and Carson rivers, supposed to have had wagons, but of that I am not certain; however, the Mormons of Carson valley in 1848 visited the mines with loaded wagons by this route which led directly to Placerville and

Sacramento. Several parties from Oregon with wagons and a portion of the immigration entered by the Lassen pass at the head of Pit river. Thus we have no less than four passes across the mountains that fenced off California from the interior of the continent, which were travelled with no other improvement than such temporary labors as the immigrants were forced to bestow previous to 1849, when a large body of people came in by the two chief routes—the Carson and Truckee passes—followed by other large migrations for 1850 and 1851 over the central transcontinental line, as well as a considerable number of wagon-trains by the Gila or southern line of immigration.

Each year saw a great deal of destitution and suffering caused by the difficulties of the road, which began almost immediately after leaving Salt Lake, and increased as the season advanced, until when the Humboldt desert was reached where the worn-out teams had forty miles of travel without water to encounter, and where many perished, while their owners, famished and footsore, were ready themselves to lie down and die. Much had been done by the people of California to alleviate these miseries by sending out to meet the immigration parties provided with fresh food and medicine. The legislature of California in 1852 appropriated $25,000 for this purpose; and the same year $13,000 was expended in constructing a free road from Yankee Jim's in Placer county to the Washoe valley. The expenditure was insufficient to complete the improvements, and the road so hopefully undertaken soon fell into disuse. The county assumed the remaining indebtedness of $7,000, but failed afterward to keep its property in repair.

This was the position of affairs in regard to a road over the Sierra in 1855. The Truckee and Carson passes continued to be used by the greater part of the immigration from Missouri, Iowa, and the middle range of states, while the southern overland travel

came in by the Gila, and filtering through Warner and Tejon passes in the Coast range, Tehachapi pass in a spur of the Sierra Nevada and the Cajon pass in the San Bernardino mountains, scattered to the various seaboard towns, or made its way to the mines of the San Joaquin district.

When it began to be urged that a road should be provided which would furnish a proper highway of travel and the passage of a transcontinental mail, the subject of passes assumed greater importance. Aside from the fact that the bulk of immigration had always taken the central route, whose terminus led to the most populous part of California where their wants found quickest relief, there was the important consideration that a community with commercial necessities was already growing up in Carson valley, and that the natural seaboard for Utah was the Pacific. As early as 1851 the Mormons had made a settlement in San Bernardino, coming in by a road through the Cajon pass, which they had since kept open, and which was laid out with the object of securing a seaport connection, and in which project they had failed.

In the discussion of routes the southern element of population in California naturally preferred the line through Texas, New Mexico, and Arizona; and for an all-the-year-round road it had freedom from snow in its favor. But on the other hand, it was extremely hot in summer, was not free from devastating storms of rain and wind, and entered the state four hundred miles from the centres of business. However, something must be done, and that without further delay; so in 1855 the legislature appropriated $5,000 for a survey of the several passes, for the purpose of deciding upon their respective merits, with a view to the construction of the long talked of road over the Sierra to which the state was pledged to the amount required, not to exceed $100,000. A commission was appointed, to consist of the governor, secretary of state, and

surveyor-general, which was to make the selection on a due examination of the routes.

The old immigrant trail from Salt lake passed along the eastern shore of the lake in a course nearly north, then bending to the northwest round the northern prongs of the lake, joined the trail coming in from South pass via Soda springs and Bear river. Here the united trails continued along the northern boundary of the so-called great desert to the head of Humboldt river, following this stream to where it bends south in what is now Humboldt county, Nevada, but which was then called Tooele county, Utah. Here the trails diverged, one keeping along the Humboldt to its sink, and crossing the Sierra either by the Truckee or Carson river passes. On the trail to Carson river was the forty-mile desert. This trail crossed the mountains south of Lake Tahoe, and forked at its western opening, one branch leading down the ridge to Placerville and Diamond springs, and the other toward Volcano and Jackson. The Truckee trail crossed the Sierra north of Lake Tahoe, and had its western end in Nevada county; and between El Dorado and Nevada counties there was a rivalry, each being aware of the benefits to be derived from securing the terminus of the transcontinental wagon-road.

From the bend of the Humboldt diverged another trail, passing between the Mud lakes in northern Nevada, and entering California by the Fredonyer and Noble passes, in about latitude 40° 40′, on the headwaters of the Feather river. From this route diverged the Lassen trail, which, passing up the High Rock cañon, entered California near the northeast corner of the state. A trail from the bend of the Humboldt to Noble pass ran almost directly west around the south end of Eagle lake, passing through Lassen and Plumas counties. From the last named trail another branched off near Susanville, and crossed the Sierra at no great distance south of Noble's by Fredonyer pass. Beckwourth pass was at the head

of the middle fork of Feather river, and the Downieville trail crossed within a few miles of Beckwourth's. The distance from Salt Lake City to the western foot of the Sierra was about 700 miles, or 721 miles by the Ruby valley route from Salt lake to Sacramento.

The southern route from Salt lake into California ran along the valley of Jordan river and Utah lake through Parawan, Cedar City, the Vegas de Santa Clara, or Mountain Meadows, thence along the Rio Vírgen, across the Mojave desert, and through the Cajon pass into San Bernardino valley, a distance of 580 miles. On this route there were two jornadas, or journeys without water, one 45 and the second 55 miles in length. With this exception the road was a good one, being kept in repair by the Mormons, who had a settlement at San Bernardino dating from 1851. From San Bernardino to Los Angeles was 137 miles, making the distance from Salt Lake to the seacoast about the same as to the Sacramento valley. But should the traveller's destination be San Francisco or the mines, he would have still another 400 miles over a road partly mountainous.

There was still another route from Salt lake to Carson valley than the one via the Humboldt. It left Salt lake, crossing the Jordan at the city, passing through Willow valley on the south side of the lake, and running about one hundred miles west; thence southwesterly through Ruby valley, after leaving which in fifty miles it struck Reese river, and kept then in a southwest course to the head of Walker lake, and up Walker river to the bend, whence it ran northwest to Genoa in Carson valley. This was in part Frémont's survey of 1845, and in part the survey of an explorer from Salt Lake named O. B. Huntington, in 1854, who was the discoverer of New, or as it was afterward named, Reese river. This route had not been fully explored in 1855, and although, as will be seen, a portion of it was subsequently adopted by the mail line, the route at the western end was car-

ried much farther north. The same route was followed by Steptoe's command, with wagons, in 1855, which came into Carson valley from Salt lake, and proceeded to Benicia before continuing its march to the Columbia river, where it arrived late in the autumn.

All this and more was laid before the California legislature, which in 1855 ordered the survey before referred to, and which offered assistance to the amount of not more than $100,000, for which the state should issue bonds payable in ten years, the money to be expended only on the mountain portion of a route to be chosen by a commission, to consist of the governor, the secretary of state, and the surveyor-general, the contract to be let to the lowest bidder.

The result of the survey, which was undertaken at the suggestion of state Senator Sherman Day, was that the Placerville route was recommended, and the portion which the state undertook to improve commenced in Carson cañon, which it followed to Hope valley and over Luther pass, was first travelled with wagons in 1854 by Mr Luther of Sacramento, along the north bank of Marletts flat, down Hawley hill on the east side of Lake valley, and crossing the southwest branch of Carson river, passed over Johnson's hill to Slippery ford, thence to Sportsman's hall, Brockless' bridge, Bartlett's bridge, and down the south branch of the American river to Placerville.

The altitudes of the survey were as follows:

STATIONS.	ELEVATION.	STATIONS.	ELEVATION.
	Feet.		Feet.
Genoa in Carson valley..	4,337	West pass.....	9,036
Daggett's.....	4,417	Tragedy springs.....	7,512
Cary's mill.....	5,032	Camp springs.....	5,497
Head of Carson cañon..	6,488	Taylor's.....	4,517
Hope valley.....	6,535	Forks of road.....	3,942
Red lake.....	7,247	Sportsman's hall.....	3,246
Carson pass.....	7,972	Hawley's.....	2,674
Camp 2.....	7,176	Placerville.....	1,755
Camp 4.....	8,736	Sacramento.....	39

The efforts of the surveyors were to improve upon the old Carson road, which, although in the main a ridge road, had thirty-two miles of an elevation of from 7,000 to 9,000 feet above the level of the sea; the route chosen having but three miles of altitude not to exceed 7,200 and an elevation below that of the old road of from 500 to 1,500 feet throughout. As this part of the subject bears upon railroads, the following table is interesting, containing, as it does, the comparative extent and duration of snow-fields on the adopted route, the old road and other routes starting from Carson cañon:

SNOW REMAINS DURING YEAR.	ALTITUDE ABOVE THE SEA.	ROAD ADOPTED.	JOHNSON'S ROAD.	OLD CARSON ROAD.	BRADLEY'S CUT-OFF.
	Feet. Feet.	Miles.	Miles.	Miles.	Miles.
	2,000 to 3,000	6	2		
1 month	3,000 to 4,000	13	4	6	6
2 months	4,000 to 5,000	10	7	7	8
3 "	5,000 to 6,000	9	14	10	16
4 "	6,000 to 7,000	11	22	13	22
6 "	7,000 to 8,000	3	3	24	9
8 "	8,000 to 9,000			8	
8 to 9 "	over 9,000			1	

The immigrants, therefore, in order to avoid the sharper hills and deeper gulches of a possibly lower pass, had preferred to climb to an elevation of 9,000 feet to secure a road less broken. As they arrived at the pass late in summer when the snow was off the ground, this would do very well. But in surveying for a road to be kept open through the winter, high altitude was to be as far as possible avoided. Not only that, but from the vicinity of the lofty peaks surrounding the old passes and protecting the snow from the action of the sun's rays, it was necessary to run the road as far as practicable along the southern exposures of the hills, and this the survey of 1855 was believed to have done.

The legislature accepted the report of Surveyor-general S. H. Marlette as conclusive, and $50,000 was expended in changing the old immigration road so as to improve some of its most objectionable parts, and

entirely avoid others. It served the public demand for a couple of seasons, but, being neglected and exposed to severe storms, became unfit for travel.

In March 1856 Day secured the passage of a bill, to be submitted to the people, appropriating various sums from $20,000 to $100,000, amounting in all to $240,000, for the survey and improvement of five wagon-roads over the Sierra Nevada, namely, via Noble, Henness, Luther's, Big Trees, and Cajon passes, to be paid for in state bonds running ten years at seven per cent interest; the annual tax for interest and sinking fund to be three cents on each $100 of taxable property. Nothing came of the proposition, the supreme court pronouncing it unconstitutional. Owing to the many petitions in favor of their particular routes, and to the opposition of the advocates of a Pacific railroad, who thought it better to expend the money on one railway than five wagon-roads, it would have been impossible without this decision to have secured unanimity of choice. The following year, however, congress granted $550,000 for the construction of a wagon-road from Fort Kearney via the South pass and Salt Lake valley, to the east boundary of California near Honey Lake valley or Noble pass. One of the California company's stages was driven from Oroville to Honey lake across the Sierra May 29, 1857, meeting with no serious impediments. This was the first stage ever driven over this range of mountains.

This adoption of a more northern route stimulated the counties of Sacramento, Yolo, and El Dorado to unite in improving the Placerville road, which was done; and in June of that year the directors of the road company formed to make the improvements were driven over the line in a Concord coach, and a stage line to Genoa was established immediately thereafter by the California Stage company. The making of the Placerville route a mail line established it in public favor, and secured its passable maintenance,

although it had still a narrow bed and many steep pitches and sharp turns. The reconstruction of the worst portion was completed in 1858 at a cost of $50,000, raised by a special tax. The legislature was then asked for an appropriation of $50,000 more to make it a good coach-road, which it was not, notwithstanding the improvements put upon it.

But nothing more was done by municipal or state authority. Two branches were constructed by private enterprise for private gain, and it was not until after the discovery of gold and silver in Carson and Washoe valleys, that a company was formed which made this one of the best roads in the United States, over which six-horse coaches and fourteen-mule teams travelled in an endless procession to supply the wants of a new and growing state. This was not accomplished without considerable difficulty. The line was removed by private means to the south side of the American river in 1860, and in 1861 it was opened for loaded teams. The grade being easier and also a little shorter, travel took the new route. But in the extraordinary storms of 1861–2 both the old and new routes became impassable. The private companies could by tolls recoup themselves for losses and expenses; but the county could not repair that portion under its charge, and as the new line ran into the old one at either end it was of little use to improve the one unless the other was put upon the same footing. The board of supervisors of El Dorado county then became authorized to collect tolls, and out of these the improvements were finally made by a company to which the county road was leased. Out of this lease fortunes were made, as well as out of the branches. Their value to the owners was an ultimate cause of the Central Pacific railroad taking the Truckee pass, and of Placerville falling into decay, through a cessation of the freighting business and travel, as will be seen by reference to my history of railroad construction and transportation.

Even in the best days of the Placerville and Carson road it had the annual struggle with snow in the higher portion, where for twelve miles wheels were useless and passengers and freight were transferred to sleighs. It sometimes happened that a station was snowed under, and the visitor was compelled to descend eighteen feet from his level to the level of the inn floor. Yet in May no one would have suspected the fact or have believed the story, were it not for the marks of snow level on the flagstaff which all patriotic Americans erected in the sixties.

Six daily stages ran from Folsom to Placerville, four from Placerville to Carson City, and two from Carson to Virginia City, making twelve coaches on the Pioneer stage line, which travelled this route daily both ways. This company employed 600 horses, and 50 men as agents, clerks, drivers, etc. There were 93 hotels on the route, with accommodations marvellously good considering the distance from which their supplies were drawn. The estimated amount of business done over this mountain road in 1861 and 1862 per annum was

30,000 tons of freight at $100 per ton	$3,000,000
36,500 passengers at $30	1,095,000
Mails and express	125,000
Total	$4,220,000

The same motives that governed the El Dorado county people influenced the population of Placer and Nevada counties through which ran the Truckee pass road. The distance from Sacramento was 141 miles, or four miles shorter than via the Placerville route. In 1856 Placer county had a partial survey made with a view to improving the immigrant road via Donner lake, but the scheme failed, and it was left for private means to construct mountain roads after the settlement of Nevada by a mining population.

The first undertaking in this direction was the organization of the Truckee Turnpike company in 1859 to construct a road through Henness pass, connecting

at North San Juan on the Yuba river with a turnpike from Marysville, built by the Henness Pass Turnpike company. Joining their forces at North San Juan they completed the road to Virginia City at a comparatively trifling expense, which was travelled by stage and express lines for ten years, but without being able to draw so far north the bulk of travel or freight traffic.

The road which did divide the trade with the Placerville route was one constructed by the Central Pacific Railroad company or its principal stockholders, Stanford, Huntington, Crocker, and Hopkins. It commenced at Dutch Flat in Placer county and terminated on the Truckee river, where it connected with other roads to all parts of Washoe and Humboldt counties in Nevada. It was a good road, with an easy grade, and was wide enough for the passage of heavy freight wagons, and was built to be a feeder to the Central Pacific railroad. It was opened to Virginia City in ~~August~~ July 1864, the opening being celebrated by a race between the stages of the Pioneer Stage company on the Placerville line and the California Stage company on the Dutch Flat route. The distance, as I have said, was not much greater on the old than the new road, and the ordinary time from Sacramento or Freeport, where the stages took the mails and passengers, was about twenty-three hours, or thirty-one hours from San Francisco. Both routes included a section of railroad travel. From Freeport to Latrobe, where the Pioneer stage started, was thirty-seven miles; from Sacramento to Newcastle, where the California company's stage started, was thirty-one miles. The Central Pacific railroad had a good track and engine and the thirty-one miles was run in forty-two minutes. The Sacramento Valley railroad had neither a good track nor fast locomotive, and made the run of thirty-seven miles in an hour and a half. When the Pioneer coach had reached Strawberry valley, nearly twelve hours from Freeport, and nearly fifty miles from Virginia, a dispatch was sent

back which read: "Heavy rains, heavy road, heavy load; just arrived." An hour later a dispatch announced the arrival in Virginia City of the rival company's stage, beating the Pioneer line by about nine hours. The California stage company had made a special trip in thirteen hours from Sacramento to Virginia, which was one hour longer than the Pioneer line had taken to make a special trip from Virginia to Sacramento in June. A good deal of acrimonious newspaper correspondence ensued, and the Dutch Flat company was accused of using unfair advantage to secure this "miraculous speed." The miraculous speed was not maintained, but with the help of the Central Pacific railroad the California Stage company was able to outrun its competitor. As the railroad progressed it forced the stage and freight wagons to make connection with its terminus, and the forwarding houses to move with it. So important was the business that the public for a long time suspected that the railroad was only a feeder to the wagon-road; and from this view of the character of the enterprise came the name of Dutch Flat swindle, by which the Dutch Flat turnpike was known. By the time the railroad reached Colfax, this route commanded the greater part of the freight and passenger business between California and Nevada.

What the revenue of the wagon-road company was is unknown, but that it was enormous is evident. Some idea of the business which it took away from the Placerville route may be gained from the fact that former teamsters on that road often reported a detention of several days in the passage from Virginia to Placerville, occasioned by the difficulty in passing loaded wagons going in the opposite direction, which constituted a continuous train on the narrow grade. The toll roads leading down the eastern slope, it is said, annually paid their owners double their cost. The amount collected, of course, depended upon the length and cost of a road. The following rates fixed

in 1865 are illustrative of the comparative incomes of the Dutch Flat and Donner Lake road, and the Rough and Ready and Nevada turnpike, a short road in Nevada county:

	D. F. & D. L.	R. & R. & N.
Wagon and ten animals	$17.00	$ ....
" " eight "	15.00	.62½
" " six "	13.00	.50
" " four "	11.00	.37½
" " two "	9.00	.25
" " one "	5.00	.12½
Loose stock	.50	.03

But rates had been reduced since 1858, when another short road in the same county charged a toll of three dollars for a wagon and six animals. In 1879 it was one third of the former rate. Nevada county had no less than thirty toll roads, and Placer fourteen. As the counties grew richer, they purchased these roads and made them free, few now remaining which are not county roads.

The counties at the northern and southern extremities of the state were backward in securing roads. The north being broken, and thinly populated, except by transient mining communities, depended upon the pack-trains, which were loaded at the coast, and which made their way into the interior over the roughest of mountain trails, often being troublesomely beset by the Indians, until after 1856. Pack-trains also fitted out at Marysville or Sacramento for the northern mines, until such time as steamboats commenced running to Red Bluff. Then wagons began to be used to carry goods to Shasta, and roads in other directions were talked of.

It should be mentioned, however, that in 1852 James L. Freaner, with four others, namely, John Brands, Jackson, Warren, and a Mexican known as Adobe John, set out to locate a wagon-road from Shasta to Yreka, via Sheep rock and Pit river, and

were all killed by the Indians. Nothing was known of their fate for four years, when it was divulged by the murderers. In 1856 A. M. Roseborough and Samuel Lockhart undertook to lay out a road on the same route, and piloted a train of thirty-five immigrant wagons over it, establishing a ferry on Fall river. Soon afterward the California Stage company put on a line of stages to Yreka, and freight teams began to carry the merchandise of the country. In 1858 a road was made over Scott and Siskiyou mountains, which became a part of the stage route to Oregon. Congress had been appealed to in 1855 to appropriate money for a military road from Crescent City to Shasta valley, but the application had failed, as also did the project for a plank road between these points; and the improvement of wagon-roads has depended upon the gradual growth of county wealth, and the requirements of staging.

Most of the important, or, more properly, long wagon-roads were constructed after 1860. The Big Tree route, via Murphy, was opened in 1864, although not completed until the spring of 1865. The Amador and Nevada wagon-road was a transmontane construction, opened in 1863, which charged ten dollars for loaded wagons with twelve animals, less for smaller teams, and half price for teams returning without freight. This road commenced at Antelope springs, in Amador county, and ran east along the dividing ridge which separates the Consumnes and American rivers from the Mokelumne river to Carson cañon, where it joined the Placerville road. It was a shorter route than either of the others from Sacramento or Stockton, and had its share of patronage before the great railroad reduced them all to the rank of merely local highways

In 1866 a road was opened from Chico to Owyhee, 401 miles, and thence to Virginia City, Montana, a total distance of 801 miles, over which stages and freight wagons were run. No toll was collected,

except by the Indians, who sometimes took the whole outfit, and who made it impossible for some months to keep horses enough on the route to haul the stages. This route was opened from the Sacramento river partly to avoid the "twenty-feet-of-snow-and-forty-mile-desert Dutch Flat route," as the friends of the Chico enterprise scornfully denominated the Central Pacific's feeder. The plucky Idaho company succeeded in drawing a large body of travel over their wilderness road, and thereby saving a good deal of money in tolls via Nevada, as well as sea and river transportation via Portland, Oregon.

The wagon-road to Yosemite via Stockton and Coulterville was changed to a route via the Merced grove in 1873, but it was not until 1875 that a road was opened, via Mariposa, which allowed of the passage of wagons, and enabled the tourist to dispense with horseback travel for a portion of the way. The road to the geysers of Sonoma county was not completed for driving before 1861. It then ran over the Hog's back from Healdsburg, but in 1869 a toll road was constructed from Knight valley, and a stage line placed on the route; and in 1874 another toll road from Cloverdale, up Sulphur creek, was constructed. A road to the peak of Monte Diablo was completed in 1874, which is passable for pleasure wagons, though it is not kept in perfect repair. A trail also has been made to wind to the top of Mount Tamalpais for the benefit of sightseers; and few are the localities in the central and northern portions of the state to which there are not now passable wagon-roads.

The south, until within a period opening about 1880, progressed more slowly. The Tejon pass in Kern county was improved in 1854 so as to be passable for wagons, and in 1856 a road convention was held at Murphy, in San Joaquin county, in which the southern counties joined, to promote the construction of a road to Carson valley via the big trees, but the

object of the convention failed at the time. The first great undertaking in the extreme southern counties was the opening of communication between San Diego and Fort Yuma to facilitate commerce with Arizona and New Mexico. As in the case of the northern division of the state, it had been entered by immigration and marched over by troops without, however, giving much attention to the commercial significance of easy transportation, although some trade with Arizona was carried on which was likely to be diverted by the Kansas Pacific railroad.

In 1870 the San Diego and Fort Yuma Turnpike company was organized for the purpose of opening a new route between these points 75 miles shorter than the then travelled route from San Diego, and 110 miles shorter than the road from Los Angeles to Yuma, by which freight would be reduced from six to four and a half cents a pound. The company incorporated with a capital of $50,000, A. Pauly being president, and the board of directors consisting of J. Nash, W. J. McCormick, John G. Capron, S. W. Craigue, C. Dunham, C. L. Carr, and D. W. Briant. The company were unable to complete their designs as they wished. The amount of freight passing over the road in November 1870 was 150 tons monthly. The report of the secretary in 1872 showed that of the total amount of stock subscribed, only $10,600 had been issued, and of scrip $3,476.35, of which $567.35 was unredeemed. The tolls for the year amounted to $1,082, with a discount on currency which reduced its earnings to $1,057.75. As the expenses of the road amounted to $818.87, its net profits were $238.88. The total assets of the company, including cash, were $288.56. Fortunately it had no liabilities. According to the secretary's report there had been a falling off during the year of one hundred per cent, owing to "the facilities for supplying the territories via the gulf" having been increased, and the high cost of hay and grain. This would be

a discouraging account to render were the value of the road to be judged by its net profit to the company. Its indirect advantages to San Diego merchants and other classes of citizens had been great, among which were to be reckoned the increased mail facilities and passenger traffic. The anticipations awakened about this time of a railroad from the east to San Diego checked the interest in wagon-roads, which it was expected would soon be replaced by the swifter steam motor lines.

In 1874 there were the following roads leading out of San Diego: to Yuma, 197 miles; to the Julian and Banner mining districts of the county, 55 and 65 miles; to San Luis Rey, 45 miles; to Temecula, 60 miles; to Warner's rancho and Agua Caliente, 75 miles; to San Bernardino, 120 miles; to Camp Mojave, 437 miles; to Phœnix, by branch roads from Maricopa wells, 405 miles; to Camp McDowell, 461 miles; to Prescott, 515 miles; to Camp Verde, 622 miles; to Albuquerque, 918 miles; to Santa Fé, 990 miles. To points in the coast range of counties—to Los Angeles, 124 miles; to San Buenaventura, 194 miles; to Santa Bárbara, 225 miles; to San Luis Obispo, 323 miles; to Paso Robles, 351 miles; to Salinas, 395 miles; to Gilroy, 432 miles; to San José, 462 miles; and to San Francisco, 516 miles. Another route to San Francisco branched off at Los Angeles to Bakersfield, 316 miles from San Diego, where it connected with the Central Pacific branch railroad to Oakland, 614 miles. These were the roads connecting county with county, and made passable for mail and other wagons by the county funds. The imported freight of the southern counties was delivered at San Diego, San Pedro, Santa Bárbara, and San Luis Obispo by the coast line of steamers and had not far to be carried inland, while the exports, which were light, travelled the same routes.

From this sketch of the wagon transportation required by so vast a state as California, together

with the cost in road-building, in tolls, and in freight and passage money, some idea may be formed of the amount of capital involved in this one branch of the business; nor is it unworthy of remark that this immense expenditure covered a space in the state's existence of less than twenty years, or that the means of transportation so costly then have been obsolete for the same length of time, except in the most remote localities.

Of those necessary, and sometimes costly, adjuncts of land travel, ferries and bridges, it is fitting that some mention should be made. Ferries were first established by the aborigines, who for a trifle conveyed travellers across streams not fordable by the simple contrivance of a tule raft, which they rowed, or dragged across by a cord held in their teeth while they swam in advance. The Mexicans improved a little upon this frail wherry by substituting rude canoes, and immigrants a wagon-box; and many were the Americans who in early mining travel took without charter a ferry franchise, and with an inexpensive—or what should, but for the times, have been an inexpensive—and clumsy board raft and a stout cable, set themselves up in a profitable business. According to the *Californian*, an excellent ferry-boat was in operation at Montezuma in February 1848, which could cross twenty head of horses or cattle, besides which there was a good wagon-road from Montezuma to Pueblo de San José and the Sacramento valley.

Three Yankees, says Taylor in his *El Dorado*, established a ferry on the San Joaquin, between Livermore and Stockton, charging for carrying over a horse and man two dollars, their receipts ranging from $500 to $1,000 a day. They had in connection with the ferry a tavern and grazing-camp which were very profitable. Their boat was a heavy flatboat, which they had built with their own hands, as well as a launch of sixty tons, which ran between Stockton and

San Francisco. Little also relates that, having a great many goods to transport to Coloma, it was an object for him to purchase the ferry at that place, which he did, and subsequently built a bridge costing $20,000, which soon paid for itself, even at reduced rates, after which he built several others, at Salmon falls, Spanish bar, Middle fork, and North fork, all of which were highly productive property.

In 1855 Keeler's ferry on the Stanislaus river sold to Dent and brothers for $12,000. There were six other ferries on that stream, which, if they were equally valuable, made the river a source of wealth to some, if of heavy expense to others. Dean says, in his statement, that he put a ferry on the Tuolumne river in 1850, consisting of a simple dugout, which was finally carried away with a man in it. Subsequently a gradual improvement was made, in all degrees, from a scow with a steam engine and a tiny cabin to the most elegant and commodious ferry-boats in the world, such as ply on San Francisco bay.

The ferry between Oakland and San Francisco has always been known as the Oakland ferry from the following circumstances: In May 1852 the board of trustees of that newly chartered town passed an ordinance conveying to Horace W. Carpentier the title to the lands within the corporate limits lying between high tide and ship channel, on condition of his erecting wharves and a public school building, which agreement he performed, and received his deed. On the fifth of March 1854 the board passed an ordinance for establishing and regulating a ferry between Oakland and San Francisco, and contracted with Edward R. Carpentier, his heirs and assigns, to put in operation and maintain a ferry for twenty years on this route, granting to him the exclusive franchise, and reserving to the city one per cent of the net profits. Carpentier contracted with Charles Minturn and the Contra Costa Steam Navigation company to run suitable steam ferry-boats, and on the 21st of October

1854 H. W. and E. R. and Harriet Carpentier conveyed to Minturn and the above company all the rights, powers, franchises, and immunities of the Oakland Ferry company, which were, as they believed, exclusive, to run ferry-boats between any part of the water-front of Oakland to San Francisco, or any other place or places. The company constructed boats, and made improvements at an expense which brought their income under their expenses for three or more years. In 1858 the Carpentiers themselves set up an opposition line from San Antonio creek, when the company brought suit to enjoin them from running a ferry, which injunction was not sustained, the judges of the United States court deciding that the laws of the state did not justify a monopoly, and that in any case the great arms of the sea were free to competition and did not come under the ferry laws. When the twenty years' contract had expired Carpentier transferred his rights to the Central Pacific railroad company, which now owns the Oakland water-front. First-class ferry-boats now run between San Francisco and San Rafael. A ferry was opened to Berkeley in 1874 which has been superseded by the railway from the Oakland ferry.

Ferries where bridges could be used were soon superseded. Indeed, bridges were a necessity after the introduction of freight-wagons, the precipitous banks of the mountain streams rendering ferries generally impracticable. The first bridge across Yuba river was erected by John C. Fall for the Park's Bar Bridge company in 1851, and cost $30,000. It was sold afterward to William Husley; and in 1858 being undermined by the current one-half fell into the stream. In consequence of the change made in the river by mining débris it became useless, and was removed by the county.

The first bridge over Feather river was erected in 1853, between Marysville and Yuba City, by J. C. Fall and George M. Hansen. A ferry was run in

opposition to it for a year or two by W. S. Webb, when the proprietors entered into a combination and Webb became part owner of the bridge. It was a cheaply built concern and ought not to be well spoken of, for in 1854 one span broke down under the weight of a drove of cattle, and after being repaired fell again in 1861 with the weight of two teams upon it. Both these structures collected heavy tolls.

At the time when the latter bridge fell, and before a controversy was going on between the owners of this and other toll bridges on one side and the public, headed by W. H. Parks, who represented Yuba and Sutter counties in the state senate, on the other, and who had introduced a bill authorizing the construction by Sutter county of a bridge across Feather river, to remain a toll bridge at a low rate only until the cost of its construction had been discharged, when it should become free, except when in need of repairs, and only enough money should be collected to keep it in good condition. This was striking at the root of a species of legalized freebooting, but Parks carried his point, and although the Fall-Hanson-Webb party obtained an injunction on the ground that the county bridge was an infringement of their charter, it was sustained by the courts, and in 1861 the Parks free bridge, as it was called, was completed at a cost of about $40,000, and the county fixed the toll at ten cents a team, while the opposition made theirs, which had been rebuilt, free. Thus affairs stood when the high water of December 1861 solved the perplexity by carrying off the Fall-Webb bridge and leaving the county bridge standing. Tolls were then raised to twelve and a half cents for a team of two horses, and six and a quarter cents additional for each additional two horses. The travel over it was so great that in 1871 it was declared a free bridge.

A bridge was erected in 1861 over the Yuba river at Simpson's ferry, a mile and a half above the junction of the two rivers, by Mrs Simpson, being built

upon piles for a distance of 800 feet. The flood of that winter carried away 300 feet of it, and there being now no bridge across the Yuba at Marysville, the citizens determined to erect one under the Parks bill, which had become a law. The plan was furnished by a committee consisting of W. H. Parks, Peter Decker, W. T. Ellis, Charles Schidell, and one other, and after considerable contention as to the locality a bridge 1,500 feet long and costing $36,000 was constructed by Parks and A. J. Binney, who received in payment scrip on the bridge fund in the county treasury, which was redeemed by the tolls received at the bridge in the same manner as in the case of the Feather river structure.

An experiment was tried with a tubular iron bridge above Parks bar by Matthew Wood, which proved a failure. When the supports were removed it fell, being unable to sustain its own weight. Besides the two Marysville bridges there were standing in 1858 eleven others in the county of Yuba, all of which were private property, and collected tolls.

The Nevada county court of sessions, in August 1850, granted licenses to Rideout & Co., to construct a toll-bridge across the middle Yuba at Martinsville and J. K. Dunbar to erect another across Deer creek at the lower crossing. From the rates of toll established—for a footman twenty-five cents, for an animal with a rider or pack one dollar, or without, fifty cents—it is evident no wagons were expected to invade these mountain districts.

The same court in February 1851 granted a license to Matthew Sparks, who kept a ferry, to build a toll-bridge across the middle Yuba at Nye crossing, fixing the rate for a loaded wagon at three dollars and an empty one at two, an animal with a rider or pack at fifty cents, and without at twenty-five cents. Sparks' bridge, which was built by Thomas Hess, was carried away by the flood of the following winter. In 1852 Hess built another bridge, which he sold to Thomas

Freeman in 1854, since which time this place has been known as Freeman's crossing. In 1855 the bridge, was rebuilt, but the flood of December 1861 carried it off, when Freeman removed to some other place and began the construction of another bridge, which was also carried away by the high water of January following. After the flood had subsided he rebuilt his bridge.

There were twelve toll-bridges in Nevada county in 1859, one of the best known of which was erected on the South Yuba by William E. Robinson in 1853, and rebuilt in 1859 by John Webber, by whom it was purchased and who sold it to J. S. Wall, who lost it by the flood of 1862 and rebuilt it the same year, selling it in 1865 to J. M. Black. Bridge property was in good demand during this period of generous tolls.

A bridge at Illinois bar on the south Yuba was built in 1856 by J. L. Cooper and rebuilt in 1863. Cooper and Joseph Kyle, his partner, were murdered here November 26, 1866, for the money in their safe. The murderers were never discovered. In the following June their bridge fell into the stream, carrying with it a loaded wagon and six-horse team, with their driver Thomas Holden, who perished with his horses. By 1869 most of the roads were well furnished with bridges, and the county began about this time to purchase and make them free.

At Nevada City two bridges across Deer creek were carried away by the breaking of Laird's dam February 15, 1857. They were rebuilt. In 1863 that on Main street fell with a drove of cattle, since which date both have been again rebuilt. But the oldest bridge in Nevada City was erected in 1850 below Broad street and a new highway laid out called Bridge street. After doing service for three years the city and county constructed a suspension bridge at Pine street, which was seriously damaged by the breaking of Laird's dam, and although repaired lasted

but a few years. In 1861 it was found necessary to replace it, and the legislature authorized the city to levy a tax of five-eighths of one per cent for the purpose. But the opponents of the tax—those who lived on streets supplied with bridges—brought suit to test the legality of the special tax, which was sustained in the courts. The time wasted in litigation was unfortunate for the contractors, A. S. Halladie & Co. of San Francisco, who undertook the work for $9,000. The rainy season having come on before they could get in place the heavy towers, cables, and anchors, the softening of the earth allowed the latter to drag and the cables to sag, a defect which the contractors corrected by means of iron rods with screws at the ends, by which the cables were tightened. The bridge was completed in May 1862, and in July it fell with the weight of two loaded ox-teams, killing two men, seriously wounding two others, and killing fifteen out of twenty oxen. The contractors repaired the loss, which was occasioned by a defect in one of the iron rods above mentioned, the cost being thereby increased to $15,000. Suits were brought to recover the loss sustained by them, but the defendants were held not liable.

The Nevada City suspension bridge was the first of its kind in the state. It has a suspended surface of 4,700 square feet; the length of the span is 320 feet, and the width of the roadway 14 feet. The platform is sustained by 59 cross-timbers suspended from the cables by iron rods. The cables are four inches in diameter, and weigh together 36,000 pounds. Each is 503 feet long, and fastened in either bank by twelve-feet iron girders weighing 2,500 pounds. The bridge was repaired in 1875, at an expense of $3,000. The suspension bridge over the Stanislaus river, near Knight's Ferry, was erected by Slocum, Ross, and Bell. It was 248 feet in length, 14 feet in width, 40 feet in height, with a span of 140 feet. The buttresses were of solid masonry, and the whole cost $25,000.

Bear river, the principal stream in Placer county, across which went a portion of the immigration by Truckee pass, was not frequently bridged. Its banks were precipitous and rocky, and even to make the early ferries profitable great expense had to be encountered in cutting a road from the water to the level of the surrounding country, along the sides of the chasm which enclosed the river. Some of these ferries were at places having suggestive names, like Rattlesnake bar, Condemned bar, Murderer's bar, and Oregon bar. Bear river bridge, on the road from Auburn to Grass Valley, was one of the oldest, if not the oldest, toll-bridge in the county, and was crossed by a large amount of travel. When the Central Pacific railroad was completed to Auburn in 1865, a company was formed consisting of James L. English, Charles Crocker, Mark Hopkins, W. F. Knox, H. B. Merrill, A. B. Van Arsdale, A. A. Bennett, H. H. Hartley, and E. H. Miller, Jr, to construct a toll-road from the railroad at Rock creek, three and a half miles above Auburn, to English's bridge on Bear river, a distance of six miles. Toll on the bridge was fixed at one dollar for a loaded wagon, fifty cents for an empty one, twenty-five cents for each animal attached to either, fifty cents for a horse with rider or pack, and twenty-five cents for each footman or loose animal.

A similar short turnpike and bridge, known as Mineral bar bridge and road, was constructed by Charles Rice & Co. at a cost of $75,000. It supplanted Rice's ferry, on the trail to Iowa Hill, and during the prosperity of that place was a very valuable property. It is still used by stages and wagons from Colfax railroad station to Iowa Hill, and has some remarkably fine scenery on the route.

The road from Auburn to Yankee Jim's is twenty miles in length, and at an early day crossed the north branch of American river, near the junction with the middle fork, by a bridge which was repaired in 1855

at a cost of $12,000, or with the improvements on the road, $50,000. In October 1867 this bridge was replaced by a new and elegant structure built by H. R. Leonard. Its length is 182 feet, single span, strongly braced, and well covered. A single track across it is laid in blocks similar to the Nicholson pavement to preserve the floor, and the cost of the whole was $10,000.

Nevada county had also a suspension bridge, constructed by W. C. Lyon, at Condemned bar, in 1856, which, however, was taken down in 1865 and removed to the American river, below the junction of north and middle forks, and completed in 1866. It is now on the line of travel from Auburn to Georgetown, Coloma, Placerville, and other points in El Dorado county.

The first bridge constructed in El Dorado was at Coloma, on the south fork of American river, and connected old Coloma with North Coloma on the opposite bank. I have already mentioned it, and the ferry which existed here, which was probably the earliest in the county, and was purchased by John T. Little, who sold it to E. T. Raun, who in February 1851 built a common truss bridge of three spans, and sixteen feet in width, in a substantial manner. In 1855, fearing that the structure might not withstand another season of high water, Raun built another on a higher foundation, and in a still stronger manner. This care availed him nothing, for in January 1862 both bridges were swept away. At this time R. A. Pearris and A. H. Richards were the owners of the property, and in the autumn of 1862 built another bridge, which was also carried off in a later freshet, since which only a suspension footbridge spans the river at this point, the current of travel having been diverted by railroads into other channels.

At Uniontown a bridge was erected in 1851 in opposition to a ferry. It was a joint property. In 1855 it was rebuilt by Pogue, Ingelsby, and Roubaul;

but the flood of 1862 washed away the approaches. Being set high above the water the bridge was undisturbed, and was soon in as good condition as before in which state it remains to the present. Its owners in 1883 were Pogue brothers and Oliver Merrill. The income from this bridge was from $600 to $800 a month. Often $25 was taken in a single hour.

Raun appears to have been a builder and purchaser of bridges, as he bought from its original proprietor in 1854 a bridge across the south branch of the American river, at Salmon falls, built in 1853. It was on the main travelled road between Georgetown and Sacramento, by the way of Pilot Hill and Centerville. The high water of 1855 carried it off, but it was immediately replaced, sold in 1856 to the same persons who purchased the Coloma bridge, and carried away again by the flood of 1862, since which time this route has been abandoned, except at the dryest part of the year, when the river may be forded.

Raun also built across the middle fork, at Spanish bar, a bridge, which was transferred to Richards in 1857, when the Pioneer stage line ran over it. A ferry was first established at Chili bar by E. and H. George, who also built a toll-bridge in 1853, which was directly on the line of travel between Placerville and Georgetown. Another was erected by McCoy & Co. on Otter creek in Georgetown township in 1854, another by Merrill between Placerville and Diamond springs, and still another by George Oat on the turnpike between Placerville and El Dorado in 1855. On the north fork of the Cosumnes river was one of the first bridges in this part of the county, and another a Yeomel, which connected the northern and southern mines across the Cosumnes.

Sixteen or seventeen miles east of Placerville where Johnson's cut-off road crossed the south fork of the American river, was Bartlett's bridge, on the immigrant road from Carson valley, and, of course very much travelled during a portion of the year.

This, like so many others, was swept away by the freshet of 1855 on the 7th of March, and travel was for a time forced to take a different route. B. Brockliss then built a bridge a few miles up the stream, according to the suggestion of a surveyor of the boundary commission. These two points became noted stations on the road to Carson.

The wire-rope suspension bridge at Murderer's bar on middle fork was erected in 1854 by N. H. Smith; and the suspension bridge at Whiskey bar, below the junction, by a company in 1855, costing $50,000. Abraham Brank was the superintendent, who afterward erected a suspension bridge across the American river at Folsom. Abraham G. Kinney in 1855 erected a substantial bridge over the American river at Negro bar, or Folsom, which was opened in August, and on which a heavy toll was collected. About the same time a bridge was constructed over the Sacramento by a company, connecting the city of Sacramento with Washington, in Yolo county, at Broad street and Ann street respectively. This year seems to have been prolific of bridges.

The second bridge erected in El Dorado county was at Mormon island in 1851, by J. W. Shaw, and was a wooden structure of the American truss pattern. Like nearly every other in the country, it was destroyed by the flood of 1855. Immediately afterward Shaw replaced it with a wire-rope suspension bridge, which carried the travel over the south fork until January 1862, when it also yielded to the mighty pressure of the unparalleled inundation and devastating current of the river. Nothing daunted, Shaw replaced it soon afterward, placing the new structure on higher ground. The span of this bridge is one hundred yards, and its breadth twenty feet It cost $15,000, and was a good paying property. It was sold by Shaw to L. M. Russell and R. P. Culver, who sold it in turn, a few years since, to the counties of El Dorado and Sacramento, which made it free.

In whatever direction mines lay, there was travel, and such facilities as were needed, from one end of the state to the other, whether it was on the Trinity or the Colorado. There are no fine permanent stone or iron structures, no triumphs of engineering skill or cunning masonry to be found in California. All has been done in haste, and to get profits. Peoples, like individuals, must have periods of rapid change and development, and until this is passed it would be in vain to risk a prophecy of what their maturity will show forth. But that California will yet erect public works which shall carry down to posterity a record of nineteenth century civilization seems most probable, something which shall give evidence that we are not lacking in the sixth sense, and that we can enjoy the repose and elevation of soul which comes from the contemplation of the grand and the steadfast in art as well as in nature. In the mean time new routes of travel and new means of locomotion will have caused us to forget the brief pioneer period, when we lavished our gold so freely upon the simplest contrivances in aid of transportation.

CHAPTER IV.

ROUTES AND TRANSPORTATION—INLAND AND OVERLAND.

EVOLUTION OF THE EXPRESS BUSINESS—STAGE LINES—POSTAL MATTERS—TRANSCONTINENTAL MAIL AND PASSENGER WAGON LINES—THE PONY EXPRESS—TELEGRAPHIC COMMUNICATION—SUB-OCEANIC TELEGRAPHIC EFFORTS AND ACHIEVEMENTS—THE TELEPHONE.

As further preliminary to the great subject of modern railway traffic, not less than on account of their own intrinsic interest, I present in this and the succeeding chapter a complete elucidation of the matters relative to expresses, stage lines, postal matters, overland wagon routes, telegraphs, and ocean traffic. Previous to the admission of California as a state of the union, there were no mail routes established in the interior, and although a mail was sent out by sea to San Francisco in 1849, there were no means of distributing it through the country. The first effort made to relieve American residents from their isolation was prior to the gold discovery, when in 1847 C. L. Cady attempted to establish a weekly express service between San Francisco and Sutter's fort, which failed for want of sufficient business to sustain it. Then military expresses between posts were established, and carried free the letters of the inhabitants on their routes. The first transcontinental express was also conceived in this year by the editor of the *California Star*, and actually left for the east April 1st, being announced to go to Independence, Missouri, in sixty days, and charging fifty cents postage on a letter. This was not, however, a regular line, and only made one trip.

It was not until 1849 that a business was developed from the necessities of the case which proved most lucrative as well as useful. Alexander H. Todd was probably the first person to engage in it. He arrived in San Francisco on the pilot-boat *William J. H. Hackstaff* June 23, 1849, five months after the first United States mail was received by steamer in California and went at once to the southern mines. His health not permitting him to work in the mines he conceived the idea of starting a letter express between these diggings and San Francisco, after the following manner. He took a list of all the names of persons in the mines expecting letters, charging a dollar for registering. Proceeding to San Francisco he was sworn in as a postal clerk and took possession of all the mail matter for the persons on his list. Returning to the mines he delivered the letters at four dollars each and sold all the New York papers he could obtain in San Francisco at twice that sum per copy. As he had at one time over two thousand names on his list the business of letter-carrying became profitable at small expenditure of capital. As this was deemed by the postmaster at San Francisco too good a thing to be enjoyed by one man alone, and as he thereby lost some of his perquisities, Todd was compelled to pay him twenty-five cents on each letter. At a later period the Nevada City agents to save the twenty-five cent fee took their places in the line of ordinary applicants, but this was tedious work where thousands were called for, and the loss to the postmaster, whose insufficient salary was eked out with fees and box-rent, was a serious one. Letters had sometimes to be returned uncalled for, and these were marked by numbers so as not to be rehandled in assorting the mail in San Francisco. Practically the plan worked well and was a great convenience to the miners, and, in fact, to all classes.

On his first trip down the river from Stockton, Todd was entrusted with about $250,000 in gold-dust,

which he packed chiefly in a butter-keg, and which he had considerable difficulty in conveying to its destination. There were then no wharves in San Francisco—nothing but a staging built up from the water to the stranded ship *Niantic*, lying in the mud at the corner of Sansome and Clay streets, and a keg of gold-dust was no feather weight to handle. However, he safely delivered the gold to Lord & Co., and received his five per cent charges.

No steamboats were running to Stockton at this time, and the passage had to be made in oar-boats. For the return trip Todd was compelled to purchase a boat, out of which he made more money, as there were as many passengers as he could carry, at an ounce each, who were, besides, willing to labor at the oars; and when he reached Stockton he immediately sold his boat at an advance of $200 to a party desiring to go down the river.

Todd's business extended rapidly, the main office being in Stockton, with agencies all through the mines and up into Oregon. Every merchant of any prominence was an express agent, and delivered express letters and packages. Todd frequently started on his rounds with two pack-animals laden with letters and papers, returning with the same beasts laden with gold-dust. The necessity for taking care of the gold entrusted to him compelled him to keep safes at various offices, for the use of which he charged one-half per cent a month on deposits, the business gradually merging into banking, with the privilege of using the gold in general deposit, special deposits being marked with the owner's name and sealed, for which was paid one per cent a month, a receipt being the only security given. Todd's profits were for some time as high as $1,000 a day, which were shared by a partner, E. W. Colt. There were many imitators of Todd's express. W. C. Randolph and others who had pack-trains running to the mines carried letters

and parcels, charging $1.50 for each letter, and whatever they might fancy for any service of the kind.

It might be supposed that expressmen would be in special danger from highwaymen; but in the early days of express carrying the nature of their business, in which every one was interested, was a protection to them, and it would have gone hard with the robber daring enough to molest them. They were not infrequently robbed by employés, as might also have been expected in the mad strife for riches, and with the temptations presented. One of Todd's clerks at Stockton absconded with $70,000; another in Mariposa with $50,000; and one at Mokelumne Hill with $40,000. The last mentioned, on being discovered, committed suicide. From fires and from perils of land and sea, the Todd men suffered in common with others.

A volume of adventures might be written from narratives furnished me by men in this branch of transportation. There could but be a vast amount of extraordinary experiences in the lives of persons brought into contact with every class, and under all conceivable circumstances. Todd retired from business in 1853, the government having organized a system of post routes and offices, while means of transportation had multiplied and prices fallen off. But there were many more in the same business, almost as early as himself, and until by gradual absorption the one or two great companies had obtained control of the business to the exclusion of the lesser.

About the same time that Todd started his express, William T. Ballou, an enterprising young fellow of French descent, arrived in San Francisco, and also went to the southern mines, where he engaged in letter-carrying in the manner already described. In December 1849, one Upham, who had been a messenger for the oldest express company in the United States, Harnden's, started a line between Sacramento

and San Francisco, where it connected with John Freeman's steamer express to New York.

The express business, which finally assumed in California such magnificent proportions, was an evolution from small beginning. Mind, as well as muscle, sagacity, as well as energy, were required in its management, and a large element in its success was moral power, faithfulness, and constancy to a purpose.

The first expressman, in the sense in which it is here meant, was William F. Harnden, born in Reading, Massachusetts, in 1812. He had for several years been passenger conductor on the Boston and Worcester railroad, and clerk for New York steamboat companies, when in 1839 he made arrangements with his former employers to run an express car on their trains between Boston and New York four times a week, commencing March 4th of that year. He accompanied the car, superintending the reception and delivery of all kinds of small packages, purchasing goods for customers, and collecting drafts, notes, and bills. He had not been a month in this business before he became popularly known, and the public recognized the convenience of such an agent. The business, however, was at first small, and threatened, to prove unsuccessful, until the starting of the Cunard line of steamers, which commenced running in 1840, and so increased the number of small packages as to give him a living patronage.

Harnden's first office in Boston was at No. 9 Court street, and in New York at the corner of Wall and Nassau streets. The first loss by the express was $20,000, which went down in the burning of the steamboat *Lexington* on the night of January 13, 1840. In November of this year Harnden became associated with Dexter Brigham, Jr, and established a trans-Atlantic line, and a foreign exchange business with the chief cities of England and France, soon followed by similar offices in Scotland, Ireland, and Germany, becoming agencies for the convenience of

immigrants who desired to send passage money to their friends at home. Harnden & Co. also contracted with Boston packet-ship owners for the cheap conveyance of immigrants, and with the New York and Erie canal for the exclusive use of all their passenger-boats for the same purpose, affording protection to the newcomers from the extortion of land-sharks. Before 1844 Harnden had been the means of bringing to this country over 100,000 laborers, and placing them on western railways and canals.

Harnden was too liberal and public spirited to lay up wealth for himself, and died at the age of thirty-three of consumption, leaving a reputation which any man might envy. His European business fell to Brigham and others; and his Boston and New York business, or home express, was sold to Brigham and associates in 1846. The European company failed from injudicious speculation in 1851; and the home express the same year established a semi-weekly line between New York and Savannah, whose success caused it to be extended to other southern cities, even as far as New Orleans and Galveston.

The first imitator of Harnden was Alvin Adams, who in May 1840 started, with P. B. Burke, an opposition to Harnden. Burke soon retired, and Adams for a year or two performed all the work, and without a wagon. His next partnership was with William Farnsworth, which expired in 1842. The New York office was in a basement in William street near Wall street, with William B. Dinsmore for a clerk. Dinsmore became his third partner, and a useful one. Their operations were confined for several years to New York, New London, Norwich, Worcester, and Boston, all the business being done by two or three men and a boy, in the most economical manner. Their patronage increased, horses and wagons became necessary, branches were extended, and in 1850 Adams & Co. paid $1,700 per month for the space they occupied in a car on the express train on the New York

and New Haven railroad. The rapid increase of railways added to their business, and they were able to buy out several minor companies which had started up in the south and west; and in July 1854 the business became the property of thirty or forty persons in different states, constituting the Adams Express company, with a capital stock of 15,000 shares. Other imitators of Harnden arose, and there were several companies of more or less note in various parts of the east.

Freeman, mentioned above, was an agent of the Adams Express company, whose disastrous failure in California in 1855 is a part of the history of the state. The firm sent out, in October 1849, D. H. Haskell to found a branch house on this coast, whose business was at first confined to oceanic transportation and steamboat lines, but it gradually grew into a large banking business, until its yearly profits in this state reached half a million. Its failure was consequent upon a panic caused by the suspension of Page & Bacon of St Louis, which affected every business house in the state. Some of them soon recovered from the shock, but Adams & Co. were not among them, and a scandal attached to their failure which has never yet been explained away, and only the fact remains that their depositors lost heavily by their bankruptcy.

The oceanic express routes in 1849–50 were divided between Adams & Co., Gregory & Co., Haven & Co., Livermore & Wells, Miller & Co., Dodge & Co., and Berford & Co. The last named ran the only express line to San José; Gregory & Co. had offices in Sacramento, San Francisco, Honolulu, and Portland; Freeman & Co. operated a line between San Francisco and Sacramento, and kept a safe on the steamer *New World* which ran on this route.

One of the earliest express lines was Langdon's, in 1850, which operated between Marysville and Downieville, and subsequently to San Francisco. He was

at first a rival of Ballou, but they finally became partners. Most of the single expressmen suffered by competition. Palmer & Co. ran against Freeman on the Sacramento; C. J. Brown rivalled Todd; in Nevada City the Bowers Brothers, who ran to Sacramento and San Francisco, were rivalled by Hamlet Davis, and Hoffman & Little, and finally by the greater companies of Adams & Co. and Wells, Fargo & Co. No less than six companies had offices in San Francisco at one time.

The oldest company in El Dorado county was established by Alexander Hunter, the agent of the California Stage line, who sold out in 1855 to Wells, Fargo & Co., who had offices in every town in the county. Others who started express lines were Harris, in 1854, from Placerville to Coloma and the mining towns on the north; Asa L. Waugaman, who ran to Grizzly Flat; Redd, who ran to Indian Diggings; and Theodore F. Tracy, who ran a tri-weekly express in 1857 to Genoa, in Carson valley; and Tracy & Spear, who established a line to Georgetown in 1858. In addition to these more local lines, all the other great companies had agents at Placerville.

From Marysville and Yuba City, besides several of those already named, were Newell & Co. in 1851; F. Rumrill & Co. in 1853; Everts, Snell & Co. in 1854, succeeded by Everts & Co.; Everts, Wilson & Co., 1857; Whiting & Co., 1858; and the same year the Alta Express Co., Gibson's Express Co., and Hanaford & Co.; in 1860 Holland, Morley & Co.; and in 1870 the Pacific Express Co., followed by Wells, Fargo & Co.

In the north the mining districts were even more dependent on expresses than those along the rivers, and near post-routes. Before 1853 there were no postoffices in Siskiyou county, and letter carriage cost for a time $3 a letter, and newspapers half as much. In January 1853 S. D. Brastow carried six hundred letters on his back from Tower house to Cal-

lahan's rancho, over a road that had not been travelled for two weeks. Two dollars was the charge for delivering letters later in the year. Some idea of the business can be obtained from the official statement that, during the year ending March 1853, the Shasta postoffice received for distribution 41,263 letters, of which 37,025 were delivered, 3,495 sent to the dead-letter office, and 743 remained to be called for. The greater part of those delivered went to the mines on Trinity, Scott, Salmon, and Klamath rivers, and Yreka.

The first express in Siskiyou was started in 1851 by A. E. Raynes, between Trinidad and Bestville. He became soon identified with the firm of Cram, Rogers & Co., who ran a line to Shasta. A freight and express line was put in operation somewhat earlier by Elijah Steele and others, from Scott bar to Sacramento via Yreka, Steele riding express, which was discontinued in the winter of 1851. F. A. Rogers, of the firm of Cram, Rogers & Co., went to Yreka and established a banking business in connection with the express; Robert Cram represented the company at Shasta, Edward Rowe at Weaverville, and Richard Dugan at Jacksonville, Oregon.

The following year Rhodes & Lusk started a rival line, connecting at Shasta with Wells, Fargo & Co., while Cram, Rogers & Co. connected with Adams & Co. The failure of the latter was a fatal blow to Cram and associates. A line was then started by J. Horsley and S. D. Brastow to connect with the Pacific Express company. This line was soon succeeded by an express, banking, and passenger business, started by George, Henry, and Ridgely Greathouse and Hugh Slicer. This company ran stages to Callahan's rancho, and sent their express and passengers thence over the mountains on mules. Rhodes & Lusk became Rhodes & Co., then Rhodes & Whitney, and when the California Stage company commenced running to Yreka, they were succeeded by Wells, Fargo & Co., whose agents are now on all the stage routes.

The express company of Wells, Fargo & Co. was incorporated in New York in the spring of 1852 by Henry Wells, W. G. Fargo, Johnston Livingston, A. Reynolds, and E. B. Morgan, to extend the Pacific business of Livingston & Wells. It was a joint stock company, with a capital of $300,000, with E. B. Morgan president, and several of its officers were managers of the American Express company. This facilitated its operations, and enabled it to reduce the price of express freight between New York and San Francisco from sixty to forty cents a pound, competitors being compelled to do the same. Their office remained at 16 Wall street for several years, and was then removed to 82 Broadway. The second president of the company was Louis McLane, in 1855, who introduced government stamped envelopes into their letter business. Louis McLane was succeeded by Charles E. McLane as manager, who was in turn succeeded by Lloyd Tevis.

The California branch of Wells, Fargo & Co. was greatly advanced by the failure, in 1852, of Gregory & Co., whose business was thrown into their hands at the start, and whose established lines they hastened to secure, while the failure of Adams & Co., in 1855, completed their ascendency. The former employés of that company organized the Pacific Express company, which, with the Union Express company, maintained for some time an ineffectual opposition. The latter was a branch of the Merchants' Union Express company of New York, which had branches throughout the United States, and its agent in San Francisco was L. W. Coe. But Wells, Fargo & Co. had secured the business of all the principal lines. They transported in California in 1857 $60,000,000 in gold, besides letters and packages, and increased their capital in a few years from $300,000 to $2,000,000, with a line across the continent. That portion of their transcontinental line east of Utah was surrendered in 1866 to Ben Holladay, who had obtained a contract

to carry the mail from the Missouri river to Salt Lake City, and through Idaho to Walla Walla.

On the completion of the Central Pacific railroad, the Pacific Express company again rose in rivalry, having the Union Pacific railroad at its back; but the transfer of a certain amount of Wells, Fargo & Co's stock to the Central Pacific company secured a monopoly of the business over that line, and cut off the rival company from California.

The influence of this company was sufficient in 1868, before the completion of the railroad, to induce the Pacific Mail Steamship company to refuse to carry the Union company's freight. Allen McLane was at that time president of the Pacific Mail, Louis McLane president of Wells, Fargo & Co.'s Express company, and a director of Pacific Mail, and Charles McLane was freight clerk of the Pacific Mail and a superintendent of the express company. Why should not Wells, Fargo & Co. have the control of the express business? This company employs 1,300 men, transports annually goods to the value of $250,000,000, has its messengers travelling over 7,000 miles of stage, 8,000 miles of steamboat, and 12,500 miles of ocean routes. It carries and delivers money, valuables, packages, merchandise, and letters; it collects invoices, drafts, bills, coupons, dividends, or other paper; it fills commissions, records deeds, pays taxes for non-residents, and serves legal papers; it reclaims baggage and other property at hotels or warehouses, and redeems articles in pawn; it transfers money by telegraph; it attends to orders for goods and household supplies; and furnishes foreign and domestic exchange in addition to doing a regular banking business of its own in New York, San Francisco, Salt Lake City, Virginia City, and Carson, all of which services are now performed at reasonable rates.

Although not originated in California, the express service was developed just in time to be of the greatest benefit to the people of this state, where it was

thoroughly perfected. Good faith has distinguished it from the beginning. It has carried letters, books, newspapers, luxuries, and necessities to the remotest parts of the country, and transacted business for the miner and settler, saving them from great inconvenience.

The present company has for many years kept a record of the bullion transported by them, which answers so nearly to the amount produced as to be quoted as such by the government statisticians. Although among the earlier individual expressmen and companies were some who were uneducated, there were none who were lacking in manly courage or intelligence. Their places are now filled by equally brave and more accomplished agents and officers, competent to grasp any commercial problem. If there is less lonely mountain travel afoot or on mule-back, with highwaymen lying in wait, and less floundering through snowdrifts, with occasional deaths from cold or accident, there is still the element of peril in the service, and not a few assaults are made upon the messengers on stage and railroad lines. It seldom happens, however, that the robbers of Wells, Fargo & Co. escape, the rewards offered and the perfection of the detective system rendering it nearly impossible to avoid ultimate capture. Thus what started as an individual experiment in 1839, in 1849 was transplanted to this coast by an individual, and in another ten years had spread over the whole state and across the continent in the hands of corporations, and to-day is a necessity of our civilization, a means of culture, and a protection from crime.

The question which several times arose of the propriety—there could be no question of the right, since the company paid the United States postage—of the express companies becoming letter-carriers, was revived with vigor in 1880, and a commission was appointed to report upon the subject, who gave it as their opinion that the practice should be prohibited.

This opinion was based upon the general proposition that the federal government should monopolize the carriage of letters; but it was admitted, inferentially, that in the early settlement of the Pacific coast the necessities of the people made it, if not proper, at least pardonable, to thus interfere with the government's prerogative. Wells, Fargo & Co., on their side, answered that instead of injuring the receipts of the postal department, as was charged since the adoption of stamped government envelopes, they actually were a valuable auxiliary of the government, which was at no expense to carry the mail matter for which the company paid the postage. The press and business men took part in the controversy. It was said by these that it was impossible for the government to create postal facilities as rapidly as they were needed on this coast. Camps and settlements existed hundreds of miles from a postoffice which the express company supplied, and which would otherwise remain in complete isolation, to the detriment of the postoffice department as well as their business concerns.

In 1864 the chamber of commerce of San Francisco in protesting against the mismanagement of postal affairs on this coast, pointed to the fact that a single enterprising express company, advertising about 150 offices and agents in the Pacific states and territories, and charging from nine to ten cents coin for a single letter, had a business far exceeding the entire letter business of the San Francisco office, which was a distributing office for nearly the whole western coast of America. This company, it was said, averaged not less than 175,000 letters per month on which they paid postage, besides a large number of stamps for overweight. The preference shown for express transportation was on account of the greater facilities furnished to meet the wants of the people, which the government was admonished to emulate.

Similar reflections upon the postal service were uttered in the controversy of 1880, and a memorial

signed by 50,000 citizens of the Pacific states, wit
resolutions of the California legislature, San Francis
produce exchange, and New York and San Francis
chambers of commerce, protesting against the threa
ened suppression of the company's letter-carryin
facilities were laid before the commission. A repor
however, was drawn up in which the commissi
declared it to be their "deliberate opinion that th
letter-express business of Wells, Fargo & Co. is,
all its phases, at variance with both the letter an
spirit of the postal law; that its operation is calcu
lated to injure and degrade the postal service, an
that the interests and the dignity of the postal depar
ment demand its immediate discontinuance. W
think, moreover, that the free conveyance of this com
pany of the correspondence of its banking-house, an
the Western Union Telegraph company, and Centr
Pacific railroad is a gross wrong to the governmen
and an indefensible infraction of law that ought not onl
to be at once interdicted, but for which, if there is an
legal means of obtaining it, the department should sec
indemnity." In other words, if business men can d
so much better than government officials, the forme
should be ashamed of themselves, and be put dow
that the dignity of the latter be not overwhelmed b
confusion. But on the report Postmaster-genera
Key had to decide for or against the memorialists
the Pacific coast, and he decided not to interfere wit
their letter-express business. It has, however, decline
over fifty per cent with the increase of mail facilitie

The directors of this company have been partic
pants in many transportation enterprises, includin
stage and railroad lines, and the pony express. Henr
Wells, one of the founders, died in New York in 187
Of late years regular four per cent dividends hav
been declared to stockholders semi-annually.

Something more may be said of stage lines.
have remarked elsewhere that probably the first pub

lic-wheeled vehicle for carrying passengers in California was a wagon drawn by horses, which in 1848 ran once a month from Daniel Silles' rancho in the upper valley of the Sacramento to meet the "safe and commodious launch" of the trader Cordua, at New Mecklenberg on Feather river. It could not have had many passengers when it started, but the gold discovery must have made busy times for it, and have hurried the launch into making more than one voyage a month. Doubtless every vehicle in the country was pressed into service. It is certain that the first regular passenger-wagons or stages put on the road early in 1849 were not of the description denominated coaches. A Mr Raney, who had a rancho at the base of the Sierra, established a line of passenger-wagons between Stockton and the Calaveras river; and a four-mule team and wagon owned by L. B. Mizner and S. K. Nourse made tri-weekly trips between Benicia and Sacramento, which were continued until the rains set in, and steamboats made their appearance on the river.

San José being the capital of California after the constitutional convention, was favored with a stage-line from San Francisco in 1850, owned by J. B. Crandall and his partner W. F. Hall. It had, in fact, two lines, as I learn from the account given in Burnett's *Recollections*, in which he describes the race between them in the strife to be the first to reach San José with the news of the admission of California into the union. As they flew past the few settlements, the people who appeared at their doors to learn the meaning of the unusual scampering of the cayusus, and rattle of wagon-gear, were greeted with the hoarse shout, "California is admitted!" answered by enthusiastic cheers.

James Birch is believed to have established the first stage-line in California early in 1850, between Sacramento and Nevada City, via Grass Valley, Rough and Ready, Rose bar, and Johnson crossing

of Bear river. He also operated a line from Sacramento to Georgetown via the south fork of American river, Mormon island, Salmon falls diggings, Cold spring, and Placerville. In 1851 he changed his first route to one via Round tent, running five coaches to this point, where passenger-wagons were substituted. His stages and teams in 1854 were valued at about $75,000. Sacramento was the starting-point of these lines until the Sacramento Valley railroad was completed to Folsom in 1856, when that became the place. When the Central Pacific, and California Central reached Lincoln, Auburn, and Colfax, the stages started from any of these points nearest their other terminus. The building of the narrow-gauge railroad caused the discontinuance of the stage-line to Nevada City in 1876. Birch sold out his Georgetown line in 1856, to Wellington, who sold it to Orr. The mail contract being awarded to H. F. Page and Bart. Morgan, they sold it to Lewis & Houchin, the latter transferring his interest to Lovejoy, who for many years ran two daily lines of stages to and from Auburn to Georgetown and Placerville.

Stevens & Co. in 1851 established a line of stages between Placerville and Sacramento via Diamond Springs, running two wagons daily in each direction. In 1854 an opposition was put on this route, which continued for several years and was finally compelled to abandon the field. Stevens' line was called the Pioneer Stage line, and Alexander Hunter was agent. In July 1854 the company added a new line to run between Placerville and Georgetown, by way of Kelsey and Spanish Flat, connecting at Placerville with their main line to Sacramento, and continued beyond Georgetown by way of Spanish Bar across the middle fork of the American river. In April 1855 another branch line was started, running between Fiddletown and Mud Springs, where it connected with the Sacramento stage, which accommodated itself to the change of the railroad terminus from Sacramento to Folsom.

Latrobe, and Shingle springs. This line only ceased in 1887 when the railroad to Placerville was completed.

During the summer of 1850 a daily stage-line was started between Sacramento and Marysville, and the following year five daily stages ran over this route, one of which carried twenty passengers. Langton's express and passenger line ran from Marysville to Downieville in the spring of 1850, going at first no farther than Dobbins' rancho, where the passengers and freight were transferred to pack-animals. The Evening Pilot line and the Accommodation line ran between Sacramento and Marysville. Buckingham and Adriance owned three lines, namely, those between Marysville and Auburn, Marysville and Park Bar, and Marysville and Nevada City. Charles McLaughlin owned four lines out of Marysville, namely, to Downieville and Minnesota; to Oregon house and Dobbins' rancho; to Bidwell bar, and to American house and Sears' diggings. A line from Marysville to Bidwell was also owned by O. W. Sawtelle.

Buckingham and Adriance became members of the California Stage company which ran their lines for a dozen years. They were succeeded in 1866 by Doty & Montgomery, who sold in 1867 to Cunningham & Riley, who in turn sold in 1870 to C. Sherman & Co. The California Stage company also ran a line from Marysville to North San Juan until 1866, when they sold it to Cunningham & Moody, who transferred it to John Hogan, who in turn sold it to Sherman & Co. in 1876. J. A. Seeley started an opposition and ran it for two years, but finally sold to the California Stage company. During the Meadow lake excitement a line was established to that point. For several years, also, stages were run from Nevada City to Virginia City via the Henness pass; and the California company, J. K. Sale & Co., and the Pacific Stage company owned by James McCue and Michael Reese, all had lines on this route. Truckee in later years

became a stage centre, having seven daily and tri weekly lines running to Tahoe City, Donner lake Sierra valley, and Eureka south. There are stil nine stage lines leading from Nevada City to different parts of Nevada and Sierra counties.

Conder & Co. established a stage line betweer Placerville and Coloma in 1851, and in 1854 added a tri-weekly stage from Placerville to Drytown in Amador county, which ran by the way of Diamond springs Mud springs, Logtown, and the forks of the Cosumnes river, connecting with lines for the southern mines, and changing to a daily line in 1855. In 1856 a tri-weekly opposition was started on this route, and also a tri-weekly line between Placerville and Indian diggings, which were owned by George C. Hamlin & Co. An opposition ran on the latter route. In 1857 Henry Larkin established an Omnibus Stage line, which made two trips daily between Placerville and El Dorado. The same year J. B. Crandall established a weekly line of stages to Genoa in Carson valley, which the following May became a semi-weekly, and later a daily line.

The first stage to Shasta was started from Colusa in 1851, by Baxter and Monroe, via Monroeville and Red Bluff, on the west side of the Sacramento river, which line was finally extended to Sacramento city via Marysville, and in 1852 an opposition was put on this route by Hall and Crandall, whose line, however, crossed the river at Tehama, and went by Bidwell's and Neal's ranchos to Hamilton and Marysville.

There were seven daily lines leaving Stockton every morning in 1851. In 1855 the California company established a line to Los Angeles, which was the first overland communication had between that place and San Francisco. During the same year a new route was opened from Oakland to Stockton, from Benicia to Sonoma via Napa, from Marysville to Comptonville, and from Sacramento to Fiddletown. It was not until 1856 that a stage-road was laid out

and improved to Yreka, the capital of the northern mines. Previous to this, river navigation had been extended to Tehama, whence there were pack-trains despatched to the mines.

It was not until 1854 that stages were seen in the county of Siskiyou, when two Concord coaches were brought there by Hugh Slicer, by the way of the Willamette, Umpqua, and Rogue river valleys, and the road over the Siskiyou mountains. With these a line was started by Slicer and Greathouse, to run between Yreka and Callahan's rancho, where passengers for Shasta were transferred to mules. In 1856 a road was located via Pit river, and the California company put on a daily line from Sacramento to Yreka, with the design of extending it to Portland. In fact, in September of that year a tri-weekly stage was run from Yreka as far north as Jacksonville. But in January 1857 the Pit river Indians having massacred a number of persons in Fall River valley, and attacked the stage, the line was withdrawn for a time from the route. The California company bought out the Slicer and Greathouse stock in 1856, and ran lines from Yreka to Callahan's rancho, crossing their passengers over the mountains on mules, and transferring them to stages on this side to French gulch. The next movement was to "pack" a small wagon over the mountains to use in Trinity valley. But in 1857 the company constructed a road over Trinity mountain, which still left Scott mountain to be crossed on mule-back. This last obstacle was overcome in 1859, when, at an expense of $25,000, a road was constructed over it, and the way was clear from Shasta to Yreka. Until the autumn of 1859 the stage to Jacksonville was only run in the summer, but that year an Oregon company expended $10,000 on improving the road of the Siskiyou mountain, so that in 1860 a daily line of stages was established between Sacramento and Portland, which later was abbreviated at both ends by the construction of railroads, and finally closed out

in 1887. Another route was opened in 1860 from Yreka to Soda Springs by Stone and Sullaway. From Soda Springs the pack-train of Loag and Kenyon transferred passengers to Pit river, where stages awaited them for Shasta. A toll-road was subsequently built by Stone and son on this route, over which William Sullaway ran a line of stages to Red Bluff for several years.

In the southern counties lines of travel were more slowly perfected than in the mining districts. The first mail wagon to come to Los Angeles was one owned by Gregory's express company, which in 1851 delivered the mail one month and nineteen days after it left New York; nevertheless, but for Gregory it might have been much longer on the way, or not have come at all. It was not until 1857 that David Smith ran a line of semi-monthly stages between Los Angeles and Visalia, and thence to San Francisco, or that Wells, Fargo & Co. established an office in the city of the Angels. But then it was in that portion of the state known as the cow counties, where anything on wheels more lively than the Mexican *carreta* was seldom seen. About this time the county expended several thousand dollars in improving the Tejon pass and road, and in 1859 Paul and Chapman established a weekly stage between Los Angeles and San Diego, via San Juan Capistrano, followed by the Overland stage line, which came into the sleepy town three times a week with a mail three weeks out of St Louis.

In 1859 Paul and Chapman established a weekly stage line between Los Angeles and San Diego; in 1861 Catlick & Co. inaugurated a tri-weekly stage line between Los Angeles and San Diego; and in 1862 Alexander & Co. ran stages and an express from Los Angeles to the Colorado river, the fare being forty dollars, and carrying letters, gold-dust, etc., the United States mail line established in 1858 having been removed to a more northern route. In 1863 C. M. Small & Co. ran a stage between Los Angeles

and Soledad, connecting with the arrival of the steamers at San Pedro; and George C. Andrews, about midsummer, introduced four-horse coaches on the road to San Bernardino, making two trips each way weekly. Bruce and Knight also put stages on the route between Los Angeles and La Paz, the time being four and a half days and the fare forty dollars. In 1864 P. Banning added a line between Los Angeles and Wilmington, and in 1865 Tomlinson & Co. ran a weekly stage line to the Clear creek mines.

In 1866 there were nine stage lines arriving at and departing from Los Angeles, of which that to Fort Yuma via San Bernardino, and Lovatt's daily line to San Francisco, both carrying the mail, were the most important. The following year Tomlinson & Co. ran a tri-weekly stage to Tucson, Arizona, and in 1868 Harper & Co. put on a line to Owen river. In 1872 a new line was established between Los Angeles and Visalia, which was the last of the stages which preceded the railroad era in Los Angeles county. As for San Diego and San Bernardino, they had little communication with the rest of the world except by sea for the former, and the tardily established mail conveyances for the latter, until the railroads began to develop their business resources.

It is easy to understand the demand for passenger transportation by so restless a population as that of California. Many of the early express companies ran passenger-wagons where their routes would admit of it. The number of persons in the stage business caused at first lively competition, leading finally to combination. From Tehama to Shasta, for instance, the rivalry was keen. Each line held out inducements in the way of superb accommodations. Six-horse teams, worth from $2,000 to $4,000, and coaches carrying twenty-four passengers, inside and outside, bowled rapidly along the narrow but well-graded roads, in charge of a driver skillful as to his profession, dainty as to his dress, and often gifted with a

humor which made his society much sought after by knowing travellers. Punctuality was a cardinal virtue with these accomplished whips, and no railroad conductor could handle his gold chronometer with a more decided air. "All aboard!" and away went the fresh team from each wayside station with a bound, while the silken snapper at the end of the driver's long lash fired off a succession of shots close to their ears which kept them at a goodly speed for every mile of level or down grade road. The staging of no country ever surpassed California staging in its best days.

In January 1854 a combination was formed among the principal stage companies and owners which resulted in the organization of the California Stage company, with a capital of $1,000,000. Its first president was James Birch, who put in $75,000, and J. Haworth was the second. Other officers of the association in 1855 were Frank S. Stevens, vice-president; J. P. Leighan, secretary; C. McLaughlin of Marysville, G. F. Thomas of Stockton, and W. F. Hall of San Francisco general superintendents; James Haworth, F. S. Stevens, James Birch, O. N. Morse, W. F. and J. F. Jenkins, C. S. Coover, C. McLaughlin, N. Hedge, William McConnell, John Adriance, Charles Green, and G. L. Thomas trustees.

The company had some opposition, as in the case of D. F. Rogers & Co., who established the Comptonville and Downieville stage line, and of Uncle Obed's Independent line, which gave the more powerful organization some trouble to drive off their routes in 1855; but as they could better afford to reduce fares than their competitors, they soon had the field to themselves. In 1860 they controlled eight of the best routes in the state, covering 1,093 miles, while the independent lines numbered nine, over 404 miles of road. All radiated from Sacramento except the solitary one from Los Angeles to Visalia. The number of men employed by the California company was 138, besides their office and road agents.

In 1860, as I have before mentioned, they established a daily line of stages to Portland, Oregon, which had hitherto been dependent upon sea service. In 1866 they sold the property on this line to Frank Stevens and Louis McLane, who obtained a special contract to carry the mail. They soon sold out to H. W. Corbett, Elisha Corbett, William Hall, A. O. Thomas, and Jesse D. Carr, who operated the line until the autumn of 1859 under the name of H. W. Corbett & Co. Then Carr bought the stock and carried the mail until 1870, in which year the Oregon Coast Overland Mail company obtained the mail contract and purchased Carr's stock. This company was composed of J. L. Sanderson, Bradley Barlow, C. C. Huntley, and J. W. Parker. The firm subsequently became J. L. Sanderson & Co. In June 1871 they abandoned the route over Scott mountain, and sent their stages by the Pit river route from Redding to Roseburg, supplying the mail to the old route from Shasta to Yreka on horseback to Callahan's, and thence to Yreka in a wagon.

This way contract was secured in 1874 by the People's Stage company, composed of I. Taggert, J. W. McBride, James Vance, George Smith, and Abisha Swain. They put on a line of two-horse wagons, but soon sold out to Taggert and Culverhouse, Taggert then becoming sole proprietor, and finally Taggert and Majors owning the stock. In 1878 the original Oregon Coast Overland Mail company again secured the contract over the Scott mountain route, and put four-horse coaches on this line. The company owned lines in California and Oregon 430 miles long, besides 600 miles in New Mexico and Colorado. It owned on the former routes 392 horses, 16 summer coaches, 21 winter stages, and two sleighs, or a total of 39 vehicles. Its quarterly expenses were $40,000, its annual toll $12,000; total expenses annually $172,000. The completion of the California and Oregon railroad has changed and lessened the mileage of stage lines in the

northern part of the state, although a few short lines from Yreka to surrounding points, and two longer ones to Linkville, Oregon, have not been affected.

The California Stage company dissolved in 1866, selling out their stock to various parties. The only worthy rival it ever had was the Pioneer company, whose line ran from Placerville to Virginia City, and from Placerville to the end of the Sacramento Valley railroad, to which I shall have occasion presently again to refer.

Taking up the subject of mails, *per se*, it will not be uninteresting to revert to the beginning of the mail system of the United States, of which California is a portion. The first postoffice of which we hear was opened in Boston in 1677, when John Hayward Scrivener was appointed by the court "to take in and convey letters according to their destination." A postal system was projected in 1692, but remained unorganized until 1710 on account of the sparseness of the population. In that year parliament directed the postmaster-general of the colonies "to keep his chief letter office in New York, and other chief offices at some convenient place or places in other of her majesty's provinces or colonies in America." The English postages were fourteen pence for a distance over 300 miles, the lowest being twopence for a distance of seven miles, and the revenue was unimportant, although the salary of Benjamin Franklin, who was appointed deputy postmaster-general for the colonies in 1753, was £600 for himself and an assistant. Under the management of Franklin the system was improved and made to produce an increase of revenue, and he was the first to propose running a stage and mail-wagon between Philadelphia and Boston once a week each way. In 1774 he was removed from office. The first postage stamp issued by the United States in 1847 bore Franklin's portrait engraved upon it.

The continental congress of July 26, 1775, provided

that a postmaster-general should be appointed for the united colonies, whose office should be at Philadelphia, with a salary of $1,000; and a secretary and comptroller were allowed with a salary of $340; and the power was given to suggest as many deputies as were necessary. A line of posts was provided for from Falmouth in New England to Savannah in Georgia, with as many cross-posts as the postmaster-general should think advisable. The deputies were allowed, in lieu of salary, twenty per cent of the postages collected and paid into the general postoffice annually, when the receipts were not over $1,000, and ten per cent of all sums above that amount. Congress at this session elected Franklin to the office of postmaster-general.

At the session of April 16, 1779, congress doubled the rates established in 1710, and on the 28th of December increased the rates "twenty prices upon the sums paid in 1775;" a very good way to stop all but the most necessary correspondence; but in May following the rates were again doubled. In December following it was provided that the postage on letters should be fixed at half the rates paid at the commencement of the war. In 1787 the postmaster-general was instructed to reduce the rates of postage twenty-five per cent, or as nearly as the state of the currency would allow.

The constitution of the United States conferred upon congress in 1789 the exclusive control of postal matters, and that body on the 20th of February, 1792, fixed the rate of postage on domestic letters as follows: For every single letter not exceeding 30 miles, six cents; over 30 and not exceeding 60 miles, eight cents; over 60 and not exceeding 100 miles, ten cents; over 100 and not exceeding 150 miles, twelve and a half cents; over 150 and not exceeding 200 miles, fifteen cents; over 200 and not exceeding 250 miles, seventeen cents; over 250 and not exceeding 350 miles, twenty cents; over 350 and not exceeding

450 miles, twenty-two cents; over 450 miles, twenty-five cents. Double or triple sheets were charged double or triple postage.

Letters continued to be charged according to distance rather than weight, and alterations were made in the rates from time to time. In 1799 mail carriers were authorized to demand one cent for each way letter delivered by them to the postmaster, and to demand two cents from every person to whom they delivered a letter on their routes between postoffices. In those days the mail was carried in a pair of saddlebags, or tied up in a handkerchief fastened to the horn of the carrier's saddle. As postal facilities increased, the people demanded a reduction in postal rates; often, too, they evaded the law, and sent their letters by private hand. In 1816 some changes were made in postage, six and a quarter cents being the lowest charge for a single letter under 30 miles; over 150 and under 400 miles, it was eighteen and three quarter cents; and over 400 miles, twenty-five cents.

In 1843 the legislatures of several states instructed their representatives in congress to labor for the adoption of some measures looking to a reduction in postage, and the postmaster-general, after an examination into the question, recommended some change, although not a radical one. A letter weighing half an ounce was in 1845 carried 300 miles for five cents; over 300, ten cents, and for every additional fraction of a half ounce, double these amounts. Printed matter was proportionately high, excepting newspapers, which were free for thirty miles, and only one cent within the state where published or one and a half cents out of it. Carrying by private hand was prohibited unless the postage had been previously paid. The postage on transient newspapers and circulars was raised to three cents in 1846–7; while to California and Oregon newspapers were charged four and a half cents, and letters to the Pacific coast via the isthmus of Panamá were charged forty cents. In

1849 transient newspaper postage was reduced to ordinary rates; and in 1851 a single letter of half an ounce weight was carried any distance under 3,000 miles, if prepaid, for three cents; if not prepaid, for five cents; and for any distance over 3,000 miles, except in foreign countries, six cents if prepaid, and twelve cents if not prepaid. Weekly newspapers were carried free within the county where published, with a quarterly charge of from five to thirty cents according to the distance outside the county, and other printed matter in accordance with this rate.

The postal department being still in an unsatisfactory condition as to revenue, further changes were made in 1852, when unpaid letters over 3,000 miles were charged ten cents, and newspapers under three ounces one cent, with an additional cent for each ounce or fraction thereof. The congress of 1854–5 reduced letter-postage to three cents for all distances under 3,000 miles, and ten cents for all distances over that, and all letters were to be prepaid. In 1861 all letters from any distance east of the Rocky mountains to any part of the Pacific coast were charged ten cents. The quarterly postage on newspapers and periodicals to subscribers, not weighing over four ounces, in the proportion of five cents weekly; and for transient publications one cent each. In 1863 the first regular division into first, second, and third class matter was made, and a uniform rate of letter postage at three cents, for all distances, was adopted. The law was again amended, in 1868, so as to allow weekly newspapers to be carried free in the county where published. By amendments made in 1872, 1874, 1875, and 1879 mail matter was reclassified, postal cards were introduced, and changes, immaterial here, were made. In 1883 letter postage was reduced to two cents, and newspapers were carried for one cent.

This rather prosaic statement is a necessary introduction to postal matters in California. From it we gather that previous to 1851 letters in California and

Oregon, brought by the way of the isthmus of Panamá, by which route the regular mail was carried, cost forty cents a single half ounce; and that from 1851 to 1855 the postage on letters was six cents, or double that if not prepaid; from 1855 to 1863 the letter rate to California was ten cents, after which it dropped down to three and then to two cents. These extraordinary variations were caused by the difficulty of making the revenue of the postal system pay its expenses, the secret being found to lie rather in cheap than in high rates, provided the facilities for rapid carriage are at hand, both these conditions favoring an increase of correspondence, and in a ratio greater than the additional cost.

The first mails in California were not carried by the postoffice department, but by military messengers, a semi-monthly government express, as it was called, being established by Governor Kearny between San Francisco and San Diego, beginning April 19, 1847. It was carried by two soldiers on horseback, starting on alternate Mondays, and meeting on the following Sunday at Dana's rancho, where they exchanged mails, and returned to the beginning of their routes in time for the punctual performance of their duty the following Monday. Letters and papers were carried free of charge. North of San Francisco there was no mail, and the settlers at New Helvetia, Sonoma, Napa, and elsewhere put in circulation a petition for the establishment of post routes. In August an express mail between San Francisco and Sutter's fort via Sauzalito, Sonoma, and other towns, as just mentioned, was established by Charles L. Cady, which did not continue for any long period for want of support.

The ship *Whiton*, sailing for the United States December 8, 1847, carried a large mail and many parcels, including back numbers of the *Californian;* and three weeks later there arrived the ship *Charles*, bringing what was considered a large mail in those

times. On the 15th of January 1848 an advertisement appeared in the *California Star* offering to send a letter express by land to Independence, Missouri, letters being charged fifty cents, and the California newspapers twelve cents. Agents were appointed to receive mail and express matter as follows: C. C. Smith, New Helvetia; Beasley and Cooper, Sonoma; Charles Weaver, Pueblo de San José; Taber and Hoyt, Monterey; and J. Temple, Ciudad de Los Angeles. An article on the "Prospects of California," six columns in length, was prepared for the *Star* by V. J. Fourgeaud, intended for distribution in the States, with the object of promoting immigration, and two thousand copies were sent east by this express, the price of transportation having been raised to double the amount advertised.

An opportunity to forward a mail free of charge was then offered by the military authorities, which despatched, April 17th, by the hand of Lieutenant Christopher Carson, the first overland United States mail ever carried from the Pacific to the Atlantic. It was the intention of the *Star* managers to have sent a second mail in May, and a third in June, but by that time the stirring events connected with the gold discovery had banished all such schemes. In the month of March another public-spirited citizen, Mr Buckalew, of the *Californian*, had offered to contribute one hundred dollars annually toward the support of a weekly mail between Sutter's fort and San Diego by way of Brazonia, Montezuma, Benicia, Napa valley, Sonoma, San Francisco, San José, Monterey, Santa Bárbara, and Los Angeles, to be sustained until United States post routes should be established, provided all letters and papers should be carried free. This philanthropic intention was rendered abortive by the excitement which followed soon afterward.

The first postoffices established in California were in the rooms of the quartermasters of the army; and Captain J. L. Folsom very obligingly ordered boxes

and other conveniences constructed at San Francisco Where there were no offices, certain persons were designated as receivers of the mail, as W. W. Scott at Sonoma, David A. Davis at San Francisco, J. A. Sutter at New Helvetia, John Williams at Upper Sacramento, and William Gordon at Cache creek.

In December 1848 the *Star and Californian*, the two papers being now united, made complaint that the military mail to San Diego had been discontinued and that there was no public means of communication, although business was large, and the country rapidly filling up. The hiatus in the service was accidental and occurred on account of the reduction of the military force in the southern district. It was resumed in January, and continued twice a month until the government had established post routes from Sutter's fort to San Diego. General Riley's instructions were to have the letters and papers for different points made up in separate packages by the quartermasters of the posts where mailed, sealed, and addressed to the quartermaster of the post for which they were intended. Where no arrangements had been made for the transmission of mails, the letters and papers of citizens should be carried free of expense.

By act of congress of the 14th of August 1848 the postmaster-general was authorized to employ an agent to make arrangements for the transmission of mails to California from the States, as the whole country east of the great plains was lovingly called by the American population of the Pacific coast. The agent first to be appointed was William Van Voorhies, who arrived at San Francisco on board the *California* on her first trip out, in February 1849. A postmaster had already been appointed for this city, Samuel Y. A. Lee, being the first incumbent, who appears to have been superseded by the appointment of Mr Dallas, who declined, and the appointment of John W. Geary, who soon resigned, when Voorhies appointed temporarily C. L. Ross, a merchant, who suffered the

burden to be put upon him for the custom it brought to his store. That it was a burden is evident from the fact that the steamers at first brought about 6,000 letters and a large newspaper mail. This amount increased until in November 1849 as many as 30,000 letters were brought by one steamer, with a corresponding amount of other mail matter; and throughout 1850 this was an average monthly mail, although it was nearly doubled some months. The Sacramento *Placer Times* of April 29, 1850, says that "the steamer *Panamá* on her last trip to San Francisco brought upwards of ninety-five mail sacks, each containing an average of two bushels of letters and mailable matter."

On the 30th of March 1849 the postmaster-general recalled the commission of Van Voorhies, and appointed R. T. P. Allen agent for the Pacific coast, who arrived on the 13th of June, being instructed, as his predecessor had been, to establish offices in San Diego, Los Angeles, Santa Bárbara, San Luis Obispo, and Monterey, and like his predecessor he failed to do so. Voorhies accounted for his failure by stating that the *California* was short of coal, and could not stop at San Diego and the other places named, the only mail delivered being at Monterey, to William G. Marcy, who received and distributed it, "without, however, consenting to enter permanently upon the duties of the office" of postmaster. "No one in California seems at present disposed to take upon himself the trouble of public office," wrote the agent. He succeeded in persuading Charles W. Hayden at Benicia, Henry E. Robinson at Sacramento, William Hopkins at Stockton, Gilbert A. Grant at Vernon, John T. Little at Coloma, L. W. Boggs at Sonoma, and J. D. Hoppe at San José to accept appointments as postmasters. He appointed J. Ross Browne special agent to San Diego, who fell ill at Monterey, leaving that place still unsupplied. The letters for San Diego were sent to Monterey, where the military express took charge of them.

It is entertaining reading, the comments of the postmaster-general on California affairs. After reproving the agent for disregard of instructions in neglecting the southern portion of the country, and for failure to report fully, he takes him to task for extravagance, some instances of which are enumerated. For fourteen weeks' transportation of the mail from San Francisco to Sacramento by water, and thence to Coloma on horseback, the department was called upon to pay $9,800, or at the rate of $36,000 per annum. For the transportation of the mail from San Francisco to Monterey, and from San Francisco to Stockton, for eight weeks, at $4,000, the expense was at the rate of $26,000 per annum—"an amount," says the official, "that is believed to be vastly beyond the net proceeds of those offices, to which net proceeds you are instructed to limit the cost of your mail arrangements." As if anybody in California at that time would have carried the mails for the postage! John T. Little, who was appointed by the postal agent postmaster at Coloma, says of his experience: "It cost me about $10,000, for I had to hire a clerk at $400 a month, and give the office rent, and in addition to carry the mails at my own expense from Sacramento." Subsequently he spent $5,000 more in the vain attempt to secure the payment of this claim. Congress had not at that time established any mail routes in the interior, and it was certainly rather hard lines to be required to support a mail by order of an agent without a contract.

Another mail carrier with a claim against the government was Jesse D. Carr, an attaché of the custom house in San Francisco, who was given eight mail-bags by the postmaster at New Orleans, which he brought through as freight at his own expense, thereby saving the department the New Granadan postage and rescuing the mail from the wretched transportation afforded by that government on the isthmus of Panamá.

From the reports of the mail agent, the newly

appointed postmaster, Jacob B. Moore, and other persons likely to observe this matter, the Pacific Mail Steamship company, as well as the New Granadan government, was recklessly negligent of this important trust. Mails were sometimes returned, through carelessness, after reaching Panamá. They were thrown ashore, and left exposed all night; the bags were sometimes wet, and occasionally broken open. All this, in addition to the necessary slowness of correspondence by the sea route, was exasperating in the extreme to persons anxiously waiting for news from home, or for commercial letters, and the suggestion of General Agent Allen that a special agent should accompany the mails on this route was a very proper one.

The first great mail for the mines arrived at Sacramento by United States mail packet—that is, by a sailing craft—and was carried by expressmen to the several camps where it was due, at $2.50 for letters and $1 for newspapers. This packet was a weekly line, and the expressmen had time to make their rounds between arrivals. The mail from San José to Santa Cruz was carried weekly in the pockets of Mr Younts, by contract, at $3,500 per year. As soon as steamboats were put upon the Sacramento and San Joaquin rivers, the mails for the northern and southern mines were transported by this means. The first daily mail between San Francisco and Sacramento was carried by the steamer *Senator*, June 28, 1850, a contract being made with Captain Blair for the performance of this service three times a week, the *Hartford* alternating on the intermediate days.

The Sacramento *Transcript* of January 14, 1851, remarks that the mail arrangements of the government were bad, a large number of persons having no mail facilities, and some having to travel fifty or a hundred miles to a postoffice. Above Marysville there was no post route, and Butte county had not a single postoffice within its limits. It was mentioned

in congress that the laws regulating postal service were ill adapted to the condition of this country. Letters sent to meet persons travelling by the land route, if treated as dead letters were required to be treated at the end of the second quarter, would be sent back before the persons arrived; besides which the pecuniary means of the department were insufficient to bear the expense of sending them back; and, moreover, the price of labor and cost of rent and transportation in California were so great as to be entirely beyond the provision made for the postal expenses, and congress was urged to give its attention to this subject.

The number of letters received and sent by the Panamá route during September 1850 was 112,085, and the postage thereon was $44,385.60. In the following September the number of letters received and sent was 118,934, the postage on which was only $12,854.81, on account of the reduction made by the postal law of 1851. The whole amount collected by the department from the postages accruing from the ocean mail to California, from December 31, 1848, to December 31, 1851, was $899,456.26, while the expense had amounted to more than double that sum. The service by way of Panamá was increased to semi-monthly in March 1851, and the compensation was raised seventy-five per cent, making the annual cost of the ocean mail about $300,000.

The annual transportation of mails in California in 1850–1 was 30,498 miles, at a cost of over sixty-five cents per mile, or about $20,000. In July 1851 the service was increased to 66,960 miles at a cost of $40,441. Of this service over 6,000 miles was performed in steamboats, 5,000 miles in stages, and 55,650 by means not specified. It certainly seemed that a good deal of money was required for a trifling amount of service. El Dorado county, with a population of 25,000, received but one government mail a week until after the 1st of February 1851, when the

service became tri-weekly. Grass Valley had no postoffice at all before 1851, and Sacramento had no communication with the capital, San José, except by a slow mail coach, and expresses performed most of the business. It was notorious that at one session of the California legislature the express bills which the people had to pay amounted to $25,000. The express companies had by their great enterprise obtained so strong a hold upon the business community, that their encroachments upon the postal revenue seriously reduced it, and occasioned a protest by the department.

In July 1852, 60,000 letters were carried on one steamship, the *Oregon*, from which it would seem that the postal department had small reason for complaint. On the other hand, the people had good ground for displeasure when, as in some instances, the San Francisco mail was sent to Sacramento, or back to New York. The legislature passed numerous resolutions on the subject of mails, and their representatives in congress faithfully presented them; but improvements in postal facilities and the extension of routes went forward very slowly, and in some counties not at all. As late as 1855 it was complained by the citizens of San Luis Obispo that they had not received eight mails in eighteen months, and Klamath and Siskiyou counties none at all. That these omissions were due to the cost of transportation, with the inadequacy of the revenue to meet the expense, was understood; yet Californians believed and maintained that the government owed something to California beyond what it could get out of it in revenue during its period of immaturity. It was also true that during that period when forty cents was the postage on a half-ounce letter to and from California, the government made money out of this branch of the postal service, as witness the following table from the *United States Postal Guide and Official Advertiser*, for August 1850.

DATE.	SENT.	RECEIVED.	TOTAL.
1848—December	$ 553.08	$ None	$ 553.08
1849—January	None	119.37	119.37
February	507.78	None	507.78
March	947.17	103.42	1,050.59
April	2,536.17	750.32	3,286.49
May	4,400.82	727.20	5,128.02
June	5,435.20	1,807.88	7,243.08
July	None	None	None
August	8,984.17	2,129.79	11,113.96
September	4,025.79	4,679.56	8,705.35
October	5,265.31	5,427.07	10,692.38
November	6,604.67	6,131.47	12,736.14
December	10,140.66	6,244.76	16,385.42
1850—January	13,164.09	6,401.84	19,565.93
February	11,981.77	7,128.54	19,110.25
March	11,811.23	11,270.05	23,081.28
April	12,316.26	11,841.41	24,157.67
May	13,688.67	18,028.04	31,716.71
June	16,001.82	10,440.67	26,442.49

The number of letters carried by the California mail steamers in August 1850, was 85,000, and according to the same authority, there was an average of eighty cents postage on each letter, at which rate the correspondence with California previous to the reduction of postage in 1851 amounted to $816,000 or over $200,000 more than the cost of transportation. Only New York and Massachusetts paid more into the postal revenue than California.

In the California *State Register* for 1857 I find some further figures in later years, as thus :

	NUMBER OF LETTERS.	NEWSPAPER POSTAGE.	LETTER POSTAGE.	TOTAL POSTAGE.
Year ending June 30, 1852....	1,495,537	$	$	$183,052
Year ending June 30, 1853....	2,707,533			263,137
Year ending June 30, 1854....	2,958,681	34,821	286,126	320,950
Year ending June 30, 1856....	2,365,902	34,638	288,210	322,848

The year 1855 is not included, as during a portion of it the postage was six cents, and during another portion ten cents. According to the above authority, the receipts for the year ending June 30, 1855, amounted to 234,591, being a falling off of $86,350 by

the increasing of postage four cents on a single letter. The cost of transportation in 1857 in the state was $127,515, and the length of the postal routes 2,332 miles.

As many postal transportation matters come under the heads of Pacific mail, Overland mail, and kindred subjects, I will only add here that in 1869, when the transcontinental roads began carrying the mails to and from the Atlantic cities, there were 469 post-offices in California; the mail routes covered 7,384 miles, 865 of which were steamboat routes, costing $62,000 annually; 775 were railroad routes, costing $196,500, and leaving 5,708 miles to stage and other means of transportation. The number of miles travelled annually in the postal service was 3,200,000, and cost the department $673,358. Again in 1882-3 the number of postoffices reported was 971, of which 154 were money-order offices. The revenue amounted to $1,241,600, and the expenses to $1,518,619, leaving the state in arrears $277,000 for postal service. Of the whole, $930,940 was for transportation, four-fifths of which was performed by stage lines. The rapid increase in the population of the state since 1882 is bringing up the postal revenue in a proportion greater than the increase in expenditure. The report of the San Francisco office for 1879 was that the gross receipts for that year were $427,492.90, and the net receipts $339,085.31

Congress in 1850 made an appropriation of $100,000 for a custom-house, federal court-room, and post-office at San Francisco, which was increased in 1851 to $400,000. The building then erected has become unfit through age, the increase of business and the growth of the city in other directions, for the uses for which it was constructed, and provision has been made by congressional appropriation for a new post-office building on a more central site. Many improvements have been made in the postal service, some of which originated in the needs of the Pacific coast,

which are noticed elsewhere. The postal service in all the principal towns is excellent, and in San Francisco is of the highest order. The free delivery system, which was inaugurated about the close of 1869, in the saving of time and money to the citizens and in maintaining order at the general office is a boon to all. The increase in letters delivered in 1878, as shown by the statistics, above those delivered in 1870, showed that the business had trebled in ten years, and while much of this increase must be set down to the growth of population, a large part, also, is the result of the system itself, which makes correspondence so easy as to be freely indulged in by all classes.

The San Francisco office in 1880 employed 70 clerks and 58 carriers, who handled monthly about 1,100,000 letters and postal cards, besides the newspapers and third and fourth class matter, which made 1,500,000 packages to be handled in the same time. The mail-boxes on the streets numbered 257, and those in the business portion of the city were emptied seven times each day. The number of city letters passing through the office was about 228,000 monthly, and the number despatched in mail-bags numbered on an average 30,000 daily, one-third of which are sent to the Atlantic states. The people of San Francisco sent from 900,000 to 1,000,000 letters every month and received 700,000. The foreign mails were large—from 12,000 to 15,000 letters from Australia; 8,000 to 10,000 from China and Japan with the arrival of every steamer, besides the Mexican and the English mails. The amount of exchange done in money orders was at the rate of $3,000,000. Such was the extent of the postoffice business ten years after the opening of the Pacific railroads; its volume should be twice if not thrice as great at the present time. Yet there are those who now receive their mail with their morning paper, and several times a day thereafter, that have stood for hours in a line at the postoffice in the early days, or travelled a

day's journey to a postoffice, or willingly paid the faithful expressman five dollars for bringing him a letter to his cabin in the hills, and yet look back regretfully to the times when they revelled in the excitement of their new life, and laughed at their privations. There is pleasure in pursuit which makes possession tame.

The actual cost of mail transportation in and to California would be difficult to ascertain, and is not a matter of interest here. The variety of modes of carriage, of length of routes, with other differences of circumstance, complicates the subject; and it might be added that the special favor shown contractors on particular routes during some periods is bewildering to the accountant. That this favoritism has been shown on both sea and land routes is a matter of history, and that representatives and senators at Washington were concerned in them is well known, the scandal of the "star route" service in 1878 being still fresh in the people's remembrance. This service concerned only land routes and was described under the head of "celerity, certainty, and security" service. Contracts were taken by eastern men for routes on the Pacific coast, at reasonable prices, say $4,000 for a tri-weekly mail over a route 122 miles long. The route was extended half a dozen miles, and the pay increased to $22,000. Another daily route of 304 miles, which was bid off for $29,000 a year, was increased to over $54,000, by adding two postoffices and increasing the speed, which celerity was not required by the offices on the route. But these swindles, by whomsoever contrived, were not comparable to that which allowed Wells, Fargo & Co., at the rate of $1,750,000 for performing less than the same service which had been performed for $350,000, by another contractor during the previous four years. These are some of the incidents of our postal history which are not to the credit of the department, and render it difficult to generalize upon its expenses.

The additional facilities to transportation since the railway service was established have increased the cost, although at the same time augmenting the revenue. Postal cars, with their mail clerks at good salaries, are a large item in transportation. Carriers' salaries, and the transfer of mails to and from steamboats and railroad depots, make another large amount, added to the route contracts. In 1876 the Central Pacific alone had postal cars on its line. The saving in time effected by the system amounted to twenty-four hours between New York and San Francisco. The exchange between these cities was estimated at $150,000,000 annually. Assuming the rate of interest to be seven per cent, this saving of time would amount in a year to several hundred thousand dollars.

Among the annual expenses of the postal department for 1867 were the following items: For overland mail and marine service between New York and California, $900,000; steamship service between San Francisco, Japan, and China, $500,000; steamship service between San Francisco and the Sandwich islands, $75,000; steamship service between San Francisco and Portland, $25,000; land service between San Francisco and Portland, $196,000.

The Central Pacific railroad began carrying the eastern mail in 1867, and the following table shows the amounts paid to the company for transportation for six years, during three of which it was unfinished.

Fiscal year ending June 30, 1867 (for May and June)	$ 7,289.83
Fiscal year ending June 30, 1868	82,954.65
Fiscal year ending June 30, 1869	226,109.25
Fiscal year ending June 30, 1870	272,075.00
Fiscal year ending June 30, 1871	283,855.00
Fiscal year ending June 30, 1872	283,855.00
Total	$1,156,138.73

This was a saving of $643,579.55 in the expense of carrying the transcontinental mail by stage and steamship, as previous to the opening of the railroad, as well as a very great gain in the character of the service. In 1882 the railway service, including postal

cars, for California, cost the department $486,193; the star route and steamboat service added brought transportation on routes up to $1,094,464. The whole route expense of transportation in the United States was $18,881,052, making California chargeable with a large per cent of the whole, besides her share in $3,065,060 paid to agents, clerks, and messengers connected with transportation.

Many pathetic paragraphs have been written touching the subject of mails in California in the fifties, of the eagerness of the waiting throngs on the arrival of the steamers, and of the bitter disappointment of those who received no news from home, after perhaps months of waiting. Those days are no more; they are almost forgotten, so quickly heal wounds in healthy young bodies. Will the systems of this period also have become obsolete in another forty years?

It must not be overlooked that the Californian mind, during a long period when everything but cattle and immigrants arrived by sea, frequently reverted to the possibility, and especially to the desirability, of a transcontinental mail and passenger wagon line.

Inspired by the great migration of 1849, some St Louis men undertook to establish such a line, and made an experimental trip, charging $200 fare. Stages were furnished for over 120 passengers, but they did not find the journey a pleasurable experience, judging from the description of it published in the St Louis *Republican*. "Just think," says the writer, "of 120 persons from all parts of the world thrown together for the first time—lawyers, doctors, divines, gentlemen of leisure, clerks, speculators, et cetera, tumbled together, and forced to stand guard, cook, carry wood and water, wash dishes, and haul wagons out of mudholes!" As nothing was ever heard of a second undertaking of the kind, doubtless both the public and the contractors were satisfied with this effort.

The same congress which admitted California into

the federation of states established certain post routes within its boundaries, and also one from San Francisco to Fort Bridger and back, via Salt Lake City And as letters must have been sent by military express to forts Kearny and Leavenworth, it might be said a mail could be carried across the continent, although I do not know that it ever was so carried.

The Fort Bridger mail route was not let until 1851, when the contract was taken by A. Woodard and George Chorpening, afterward mail agent at Salt Lake City, for $14,000. Their route commenced at Sacramento, and ran via Folsom and Placerville, and crossing the Sierra by the immigrant road of 1849, passed through Hope and Carson valleys, touching the Mormon settlement at Genoa, and traversing the forty-miles desert to the Humboldt, followed that river to the head of the valley, where it turned a little south of east, taking the Hastings cut-off to Salt Lake City, a distance of 750 miles. No wheeled vehicle was used in this service, the mail being packed on muleback, and carried each way once a month.

Between savage men and savage weather the mail-carriers suffered severely. In the autumn of 1851 Woodard and two guards were attacked and killed by Indians at Gravelly ford in Humboldt valley; but Chorpening continued to carry the mail. The successor of Chorpening was Ben Holladay, who joined Chorpening in a contract obtained in 1853, by which they were required to employ covered wagons and four-mule teams, which were used for passenger conveyances as well, during that portion of the year when people could be induced to travel overland. Very different was this lonely and weary journey from the crowded, gay, and indolent voyage by sea. In summer the battle was with the ever-injured aborigine, who sought to avenge public wrongs upon private individuals; and in winter it was with swampy roads, swollen streams, freezing blasts, and blinding snow-storms that the war had to be waged. When many

successive winds had filled the mountain passes, then only valor and snowshoes won the day.

The route of the Salt Lake mail was, as I have said, by the way of the Carson pass, which being untravelled in winter could not be kept open. The mail-pouches therefore had to be carried on a man's shoulders over the mountains, the carrier supporting himself on the deep mass of snow by means of snow-shoes made in the Canadian or basket form. Fred Bishop accomplished the first trip in this manner in the spring of 1853, alternating thereafter with a man named Drit.

On the 1st of November 1853 John Adams and Alphonso Borland left Salt Lake City in charge of the mail, which in the winter was carried on mule-back. About 120 miles out from that place they encountered a snowstorm of great severity, which covered the ground to a depth of two feet. At Goose mountains the snow changed to hail and sleet, with such bitter cold that it was necessary to whip their mules at intervals during the night to save them from perishing, and Borland's feet were frozen. But for the artemesia which cropped up through the snow, their animals must have starved to death. The men themselves lived for the last six days before arriving at Carson valley on strong coffee alone, their provisions being exhausted. On the Humboldt desert one of the mules had to be abandoned, and Adams' feet were frozen. At Ragtown, a few miles from Carson valley, Indians fired on the men, who, however, were not hit. Arrived at Genoa, they were compelled by their condition to remain two weeks, at the end of which time they resumed their journey, accompanied by two other men. At Slippery ford one of these men became exhausted, and his companion remained behind to take care of him until assistance could be sent. Borland and Adams, however, pushed forward, encountering a flood in Lake valley, and being nearly cut off by it. They arrived at Sacramento with the mail in January,

having been two months on the road from Salt Lake City.

The crossing of the Sierra in winter was a feat not often undertaken, except by the mail-carriers, and for several winters not at all regularly by them. George Pierce was one of the few men who ventured upon these journeys; but the most successful and fearless of the winter mail-carriers was John A. Thompson, a Norwegian. Thompson was but ten years old when he immigrated to the United States, but there was in him the hardihood brought from the frozen plains and icy fjords of the north of Europe. The shoes which he provided for his journey were ten feet in length, six inches wide, one and a half inches thick, turned up at the front end like a sleigh-runner, and made of fir wood. Shod in this manner, he accomplished the journey of ninety miles between Placerville and Carson valley in three days, carrying from sixty to eighty pounds, and the provisions for his sustenance on the way. The trip from Genoa to Placerville he made in two days, the grade being down more than up in this direction. Overcoat and blanket he eschewed. When night came he looked for a dead tree, and making a large fire, spread spruce boughs upon the snow and stretched himself upon this fragrant couch, and with his feet to the blaze and his face to the stars slept soundly and safely. An excellent woodsman, he never lost his way, needing no compass and no other guide than those which nature spreads upon the rocks and trunks of trees. In his explorations among the mountains he discovered the lower route to Carson valley which was known as Johnson's road, and became incorporated in the survey of the stage road which has already been described.

The difficulties in the way of an overland mail were certainly disheartening, but withal such was the faith of the people in their manifest destiny that a possible failure to accomplish their wishes was never for a moment admitted. California must have wheeled

and other daily communication with the older states, must be put upon an equality with them in every way. Numerous meetings were held to consider the ways and means of procuring a mail, telegraph, and in time a railway line to the States. Among other plans advocated was that of a grant of land from congress to a stage company between St Louis and Sacramento; nor were Californians alone interested in the discussion, which engaged the brains of St Louis as well. Congress was to be asked to establish a line of posts for the protection of travel, and to aid in the construction of a telegraph line.

In 1855 William N. Walton made a proposition to the California legislature to establish a regular mail line between St Louis and the Pacific coast by means of dromedaries, an offer which that body was not empowered to accept.

An elaborate calculation was set forth in the Sacramento *Union*, making the cost of putting on a daily stage to the Missouri river $750,000, and its monthly expenses $57,000. It was estimated that each daily coach would carry nine passengers, aggregating 480 a month, which at $150 would bring in $72,000, or a monthly profit of $14,500. It was even suggested that one coach daily would not accommodate the passengers who would prefer land to sea travel, and the California Stage company was requested to look into the matter. Meanwhile James Birch, president of that corporation, was doing what he could to affect legislation in Washington, and secure the desired government aid, which efforts probably had due influence with congressmen and senators; but the times were not yet ripe for the settlement of some grave questions involved in any scheme of transcontinental transportation, even of the mails, and the mud-wagons of Chorpening and Holladay still continued their journeys to and from Salt Lake City only.

Their success in performing their contract year after year, summer and winter, had its weight afterward as

a guaranty of the feasibility of the central route which was so long fought against by southern politicians. Chorpening, the former contractor, in 1858 the year following the construction of the Placerville and Carson road, obtained a contract for carrying a semi-monthly mail to and from Salt Lake City, where it connected with the regular line from that place to St Joseph, Missouri; and a semi-weekly line of stages was run from Placerville to Genoa, carrying the express mail, by Lewis Brady & Co., successors to Crandall's Pioneer line, put on in 1857.

The new Chorpening contract was felt to be an important step in the right direction. It was a transcontinental mail, if only semi-monthly. The first stage for the east under the new arrangement left Placerville June 5, 1858; and the first from the east with direct mail connections arrived in Placerville July 19th, at ten o'clock in the evening, when it was received with fireworks, speeches, a balloon ascension, and every manifestation of joy.

It is not to be inferred from these rejoicings that travel had suddenly been made rapid, easy, or regular. There still remained the great distance, the unsettled wilderness, hostile tribes, and inclement seasons—dangers, indeed, by flood and field. On the 20th of August the mail party, consisting of the conductor and two guards, with a two-horse covered wagon, were attacked while encamped near the first crossing of the Humboldt, by a party of Shoshones who secured the horses, leaving the men without the means of proceeding, and forcing them to abandon the mail, which, with the wagon, was destroyed by the Indians. Taking their arms the men escaped to the mountains and finally made their way to Carson. In September troops were ordered out from Camp Floyd to protect the mail line. An Indian agent was also sent to coax the Shoshones into peace, and for a brief period his efforts prevailed. In January 1859 the mail arrived from the east in seventeen

days, with the president's message, and letters came through in ten days less time than by sea. On the 23d of April there were 500 pounds of mail matter sent east by stage. In June General Johnston gave instructions to J. H. Simpson, of the topographical engineers, to explore the great basin with a view to finding a direct wagon route from Genoa in Carson valley to Camp Floyd. In this reconnoissance Simpson was assisted by Reese of Genoa and other Mormons, and the mail route was several times altered. The old Humboldt immigrant route was 854 miles long; a route established by George Chorpening through Ruby valley, 709 miles; and the Simpson survey, which was adopted in 1860, was 565 miles. This route called the central, to distinguish it from the Humboldt and San Bernardino routes, was very nearly due west from Camp Floyd, and was first explored for more than half the distance by Howard Egan, a Mormon cattle-driver in the service of Livingston and Kinkead, who afterward became a mail agent. The Simpson route bore further south, running from Genoa northwest a short distance, then east across the alkali desert in Churchill county, Nevada, crossing Reese river at Jacobsville, thence northeast to Ruby valley, and east by Hastings' pass and Eagan cañon, and around the south end of Salt lake to Salt Lake City. In September 1859 stations were prepared on the new route to which the stages were removed the following winter, and in 1860 a four-horse coach was put upon the line. In the winter of 1859–60, Thompson and Child started a stage line from Placerville to Genoa, using sleighs from Strawberry valley, and keeping the road open all winter for the first time. In the spring the Pioneer line was purchased by Louis McLane, and transferred to Wells, Fargo & Co. in 1861, who then ran the entire distance to Salt Lake City, carrying passengers and express matter in excellent style. A. J. Rhodes ran an opposition in 1860 between Placer-

ville and Genoa, making quick trips and reducing the fare from $40 to $20, but was bought off, binding himself not to start another opposition. The Pioneer line was thenceforth the only worthy rival of the California Stage company, which it survived. Its coaches were of the best, its six-horse teams of the finest and truest, and its conductors most accommodating. The time from Sacramento to Virginia was about twenty-six hours and the greatest punctuality was observed. The dust which, owing to the heavy freight teams upon the road after the mining discoveries, would have been intolerable, was kept down by a daily saturation from a street sprinkler kept going in advance of the stage. Surely such consideration was never shown elsewhere by a stage company!

Frequent petitions to congress for a daily transcontinental mail produced at last this result, that in March 1857 congress authorized the postmaster-general to contract for the conveyance of the entire letter mail from such point on the Mississippi as he might select to San Francisco, for six years, at a cost not exceeding $300,000 per annum for semi-monthly, $450,000 for weekly, or $600,000 for semi-weekly service, at the option of that official. The service should be performed in good four-horse coaches or spring wagons suitable for the conveyance of passengers. Contractors were granted the right of preëmption to 320 acres of public land at each point necessary for a station, not nearer together than ten miles, and not mineral lands. The time allowed for a trip was twenty-five days, the service to commence within one year after the signing of the contract. Among the bidders was James Birch of California.

On the 2d of July following a contract was made with John Butterfield of Utica, William B. Dinsmore of New York city, William G. Fargo of Buffalo, James V. P. Gardner of Utica, Marcus L. Kinyou of Rome, Alexander Holland of New York city, all of the state of New York, and Hamilton Spencer of

Bloomington, Illinois, under the name of the Southern Overland Mail company, at $600,000 per annum to perform the semi-weekly service as required by law on route No. 12,578, or from St Louis, Missouri, and Memphis, Tennessee, and converging at Little Rock, Arkansas, and thence via Preston, or as near as found advisable, to the best crossing of the Rio Grande above El Paso, and not far from Fort Fillmore; thence along a new road being constructed under the direction of the secretary of the interior to Fort Yuma, and through the best passes and along the best valleys to San Francisco. Butterfield, president of the company, gave his name to this route. It swung to the south to connect with local lines in New Mexico, and bring their mail for California without additional cost to the department.

Before he perfected his arrangements, which required about a year, Richer, formerly a Mississippian, took a contract to run a line of mail stages from San Antonio to Indianola, Texas, the terminus of the Southern Steamship company's line of steamers from New Orleans. About the same time G. H. Giddings took a semi-monthly mail contract from San Antonio to El Paso, which was extended by the aid of Isaiah C. Woods' horse-train to San Diego, the whole route costing the government $146,000. The connection of these lines from New Orleans formed what was known as the southern route to California. It was patronized to some extent by passengers from the southern states, who paid a fare of $200, which included meals. In 1857 the California portion of the route was let to James L. Birch of the California Stage company, who died in Texas in July of that year.

The schedule time from San Antonio to San Diego was thirty days. The road was stocked with 400 horses and 25 coaches, employing 75 men. The first mail from San Diego east started August 9th, under the care of R. W. Laine. The first from San Antonio left on the 31st, and arrived in thirty-four days at

San Diego, four days over time, notwithstanding con-
gress had appropriated $50,000 to improve the road
west of Albuquerque.

These two contracts interfered with the continuity
of the Butterfield route, which was prohibited by con
tract from duplicating the service, or at least the cos
of a service already established. From Fort Yuma
to Los Angeles the Butterfield route was sole, bu
from Los Angeles to San Francisco it again dupli
cated the route by sea from San Diego and Lo
Angeles.

The first Butterfield coaches left St Louis and San
Francisco respectively on the 15th and 16th of Sep
tember 1858, making their trips on schedule time
The first coach from St Louis arrived in San Fran
cisco October 10th, and the following evening a mass
meeting was held in Music hall to congratulate th
public on the event, and to declare the approachin
freedom of the state from that Old Man of the Sea
the Pacific Mail. This is only the beginning, sai
the orators; now it is semi-weekly, soon it will b
daily. Thus was inaugurated the first transcontinenta
mail and passenger line on which the travel was con
tinuous, by night as well as day, or supposed to be s
although at Yuma and El Paso there was an inter
ruption where the former line took up the mail o
relinquished it to the Butterfield line. Practically i
was all one, and the longest on the continent, being
2,700 miles in extent, passing through Missouri
Arkansas, Arizona, and California. In Decembe
1859 the president's message was brought through i
less than twenty days.

The coaches used on it were of the Troy and Con
cord make, celebrated for their comfort and excellence
Nine inside passengers were a complement for a long
journey, but on short routes there might be a dozen
on the outside, including the driver and guard; and
with this number they frequently left San Francisco

dropping off some at San José and other points until only the inside passengers remained.

At Los Angeles the company had a depot covering considerable space, and occupied by stabling, blacksmith shops, dormitories for their employés, sheds for their coaches, feed-stores, harness-rooms, and agent's office, all built in a substantial manner of brick, in the most convenient form. At every station there was kept an abundant supply of forage, and experienced men had charge of the stock.

It was not a little exciting to watch the start of a fresh team. The passengers were seated, and the reins handed to the driver on the box before the traces of either team were fastened, so that he had them all well in hand by the time this was done. The grooms stood back, and with a bound away dashed the gay equines, as if a mad gallop of a dozen or more miles were only a frolic to be enjoyed. Four horses sufficed for a team where the road was neither sandy nor miry, and where it was heavy from any cause another pair was added. In the same manner coaches were on some portions of the route changed for Concord six-passenger wagons, very roomy and comfortable. Eating-stations were provided; and, in short, a vast amount of money was expended in preparing this line for business, from the gulf of Mexico to the bay of San Francisco, and in a period of eighteen months it failed to arrive on schedule time only thrice. During all that time, through summer heat and winter cold, under scorching suns and through tempests of rain, sand, or snow, the Butterfield wheels had never ceased to roll day or night.

Much as the people of California had clamored for better mail facilities than were afforded by a monthly or semi-monthly mail by sea, when this line was established they were at first slow to encourage the enterprise, keeping to their sea-voyages and semi-monthly mails, and even preferring to send a letter by express to trusting it to the mails at all, notwithstanding the

express went by the same conveyance. The total of all letters sent and received by the Butterfield route in October 1858 was 2,509; in October 1859 there were 46,000; but in March 1860 there were 112,465 sent and received, showing a growing confidence. The total postages by this route from the commencement to the end of March 1860 amounted to only $71,378. By the San Antonio line the postage for six months footed up but $751; and by the central, monthly line, for nineteen months, the sum total was $865.

The press of the state made a fairly good effort to change the public drift, and doubtless would have succeeded sooner but for the opposition of the populous portion of the state to the southern route. It was contended in congress by a portion of the California delegation that the central should be made a daily mail line, for two reasons; first, because it was 900 miles shorter; second, because it was much cheaper. The ground had been argued over a good many times, and the Butterfield route was barely established when senators repented having voted $600,000 annually for a mail line which travelled for hundreds of miles over a trackless waste, and squabbled in no amiable tone over the demands of California, asserting in March 1859 that $10,000,000 had been already appropriated for deficiencies in the post-office. But the Pacific coast senators, Lane of Oregon and Gwin and Broderick of California, held fast by their positions, Lane to get a northern mail route, Broderick the central one, and Gwin all. He could not go against any particular route, and took the liberal view, and the correct one, that the way to settle up the interior of the continent was to put on as many stage lines as possible.

In the wordy war over the Pacific coast service it was shown that for the two southern lines, the San Antonio and San Diego, and the Butterfield, the government paid $800,000; for the St Joseph and

Placerville line, $120,000; and for a monthly service between Kansas City and Stockton, via Albuquerque, where it connected with a line to Santa Fé, $80,000, or a total of $1,200,000 for mails to California, exclusive of the sea service, which cost $738,000 per annum; and yet the best that had been obtained was a semi-weekly service. The house of representatives was willing to make appropriations, but the senate was not, and the postoffice appropriation bill for 1860 failed on the last day of the second session of the 35th congress on account of the last of thirteen amendments made by the senate, which the house rejected. It was one of those quarrels so frequent in those times, whose motive was not to be found in the thing itself, but in sectional jealousies. Mail routes it was well understood would lead to telegraph and railroad lines, and both north and south desired to have the first Pacific railroad. So far the south had secured the longest mail line and largest appropriation; but the failure to make the customary provision for the expenses of 1860 deprived the victors of compensation and the people of California of a complete service. An offer had been made by Butterfield to substitute a daily service, on a schedule of fourteen days from Memphis, by changing his route to one more nearly on the 35th parallel; and after the successful transportation of the transcontinental mail for eighteen months, notwithstanding the neglect of congress, it was hoped that this proposition might be entertained.

The Stockton mail might be considered as another southern route, both because it took a southern course, and because it was the bantling of the chivalry element in the southern mines. The first mail over it arrived in November 1858.

The debates in the 36th congress over California postal privileges were quite as acrimonious as at the previous one. The Butterfield route, which had narrowly escaped being made a weekly instead of semi-weekly line, if not abrogated altogether, and only

retained its original contract by the failure of the preceding congress to take any action, was again made the subject of contention. Down to this time the mail stages had carried letters only—newspapers and all printed matter going by sea In March 1860 the house of representatives passed a bill and sent it to the senate, inviting proposals for carrying the entire mails to and from California, either daily, weekly, semi-weekly, or tri-weekly, the letters to be carried in twenty days. Proposals were also invited for transporting the mails by ocean routes, from New York and New Orleans in the same time—the Pacific Mail contract expiring July 1st. Gwin, who was on the committee on postoffices and post-routes, reported a substitute on the 23d of March, directing that the mail be carried weekly from St Joseph to Placerville in twenty days, semi-weekly or weekly between St Paul and The Dalles, and that the Butterfield route should be transferred to that between San Antonio and El Paso.

Three days afterward he reported a second substitute, proposing a tri-weekly service between St Joseph and Placerville for the first year, time twenty days, at $600,000, and a daily service after the first year at $800,000 per annum, carrying only matter on which letter postage was paid. On the 10th of April Gwin reported an original bill providing for a semi-weekly service over this route in twenty days, at $462,000; tri-weekly, at $600,000, or daily at $800,000, at the discretion of the postmaster-general. It excluded all franked matter from the mail, and made the postage on letters to the Pacific ten cents a single rate.

In the mean time Senator Hale of New Hampshire had offered a substitute bill providing for carrying the entire mail tri-weekly from St Louis to San Francisco over the Placerville route, in twenty days, for the first year, at $600,000; the contractors to supply Denver and Salt Lake City weekly without any

extra compensation; and after the first year a daily mail should be carried in like manner for $800,000 per annum. It provided also for a tri-weekly mail between New Orleans and El Paso, via San Antonio, time ten days, carrying the entire mail, franked documents and all, for $300,000 per annum. The Butterfield service east of El Paso was to be dispensed with, and from El Paso to San Francisco to be increased to a tri-weekly service, which should be performed in ten days, and for which $300,000 should be paid, with an advance of $100,000 damages for the alteration of their contract. This route was to connect with the New Orleans and San Antonio route on the east end, and the company had the privilege of connecting with steamers on the Pacific. The contractors were allowed to forward printed matter semi-monthly on a schedule of thirty days. This bill also provided for a daily service in four-horse coaches between Sacramento and Portland, at $100,000 per annum, all of which was to go into effect on the 1st of July. Senator Latham, of California, had a different plan, which was to make New Orleans or Vicksburg the eastern terminus of the Butterfield line, increasing the service to tri-weekly, in twenty days, at $400,000 yearly compensation for carrying the letter mail only, and to make a contract for sea service by steamship for carrying the printed matter in twenty-one days, at $400,000 per annum.

Of these various proposed measures the Hale substitute was the favorite one in California, but against it the southern influence bore heavily, while neither Gwin nor Latham favored it. Under these bewildering circumstances the postmaster-general, who could not guess what congress would do, and who felt the necessity of appeasing the public in some way, arranged to give a contract to Russell, Majors & Co., of St Joseph, Missouri, to transport a letter mail tri-weekly from St Louis to Placerville in twenty days, for $600,000 yearly compensation, and to carry a fair proportion

of the printed mail matter semi-monthly in thirty days, Hale's idea. The postmaster-general also agreed with Butterfield to transfer his line to the San Antonio and El Paso route, so as to run from Columbus, Texas; and that trips should be made tri-weekly on a schedule of twenty days. But when the parties were assembled to sign contracts, the Butterfield company declined to bind themselves to carry the printed matter; and on the last day of the session, one hour before adjournment, the senate sent to the house, not a bill for an overland mail, but a general post-route bill, with ninety amendments, which, of course, could not be read, much less voted upon, in that final hour, wherefore it failed, as was intended.

To add to the confusion, the ocean mail suspended on the 30th of June, no provision having been made for the renewal of the Pacific Mail Steamship service, which had expired in October 1859, and had been continued to July 1860, conditionally, to await the outcome of other experimental contracts. Early in June Vanderbilt, of the Pacific Mail Steamship line, and William H. Davidge of the Atlantic and Pacific Steamship company, offered the postmaster-general to carry the mail, or as much of it as the department chose to send, three times a month, for $300,000, ocean service. But the house, being suspicious of the manner in which contracts were let, passed an act prohibiting the postoffice department from paying a greater compensation for ocean mail service between New York and San Francisco than the amount of the postage, which was indignantly rejected by the steamship companies as putting them on the footing of foreign and not domestic mail carriers.

It was, besides, manifestly unfair to appropriate $600,000 for one land route and $400,000 for another, carrying only letters, which constituted but two per cent in weight, and to offer nothing but the postage for the ocean service, which transported an immense

but unprofitable amount of printed matter. More than thirty tons had been carried by a single steamer, of which ninety-eight per cent was in newspapers, magazines, books, and other low-grade matter.

On the 18th of June the steamship companies still offered to carry the letters for the postage, and the remainder of the mail for twenty-five cents a pound, this being the minimum charge for fast express matter, but no arrangement was arrived at; and so indignant was the president of the Pacific Mail Steamship company that it was doubted if he would allow his ships to carry Wells, Fargo & Co.'s express mail.

The San Francisco *Evening Bulletin* of July 17th remarks that "California is in a worse condition than she ever occupied before. We have no mail at all except the semi-weekly Butterfield overland mail, which is exclusively for the carriage of letters. Newspapers and letters, if we get them at all, must come by express or private hand. And should a couple of hundred Indians take it into their heads to attack the Butterfield stage, we shall have no mails at all." This was indeed a dark prognostication, and fortunately never came about, although the Comanches about this time murdered a station-keeper at the head of the Concho, and drove off the company's stock at this place. The real foe to California interests at this critical period of its history was its senior senator, who while chairman of the postal committee traded off the promise of a daily mail for a fancied personal advantage. He sacrificed Hale's bill, which might have been passed but for his scheming against it, under the assurance from the administration that after the adjournment of congress the postmaster-general would enter into contracts with Russell, Majors & Co. and others, whereby California would receive by different routes six mails a week. The president and postmaster-general refused, after their purpose was accomplished, to enter into any contract for the St Louis and Placerville route, and the senator who had

betrayed his state found himself in a painful position before his constituents.

Subsequent to the adjournment of congress, Russell, Majors & Co. proposed to the postoffice department to carry the entire mail, temporarily, from St Joseph to Folsom three times a week, the time to be twenty-five days, for the sum of $900,000 per annum, and after the first of July 1861, six times a week, on the same schehule of time. This company also established in May 1859, the Leavenworth and Pike Peak express, stocking their line with 100 coaches and 1,100 mules. Their route for several months was up the Republican river; but in the autumn of 1859 they changed it to the protected Platte route, on account of trouble with Indians. In the spring of 1860, to satisfy himself and congress of the feasibility of a fast mail over the central route to California, Russell and others inaugurated the pony express, which was running during the suspension of the ocean mail, as I shall show hereafter, and which afforded material aid and comfort to the business community.

On the 11th of July, in view of the success of the pony express, and the reproaches heaped by the press upon the steamship companies, they resumed the carrying of the mails, trusting to the sense of justice of the next congress to compensate them, which it did by the payment of $350,000 for that year, and by continuing their contract. The postmaster-general in the latter part of summer increased the service from Placerville to Washoe to a weekly mail, and also, at the same time increased the service on the eastern end of the central transcontinental line to weekly, as far as Julesburg, for the benefit of Denver, but the intermediate line to California remained semi-monthly on this route until the following summer.

By an act of congress approved March 2, 1861, the contractors on the Butterfield route were authorized and required to move their stock to the central route, and to transport the entire letter mail six times a

week between some point on the Missouri river and Placerville; and, also, to deliver the entire letter mails tri-weekly to Denver and Salt Lake City. The time allowed for the letter service was twenty days for eight months in the year, and twenty-three days for the remaining four months; for the residue of the mail matter a period not to exceed thirty-five days was allowed, with the privilege of sending the printed matter by sea in twenty-five days, and public documents in thirty-five. The company was also required, until the completion of the overland telegraph, to run a pony express semi-weekly, at a schedule of ten days during eight months, and twelve days during four months of the year, carrying for the government, free of charge, five pounds of mail matter, with the privilege of charging the public one dollar a half ounce; and for all this service the company was to receive $1,000,000, the contract to expire July 1, 1864.

The Butterfield company were declared entitled to their regular pay under their former contract during the time necessarily occupied in removal, and, also, to two month's pay as indemnity for damages incurred by the interruption of their business. The postmaster-general was authorized to replace any local service affected by the discontinuance of the Butterfield route outside of California. The company accepted the modification of their contract, and began their service on the central route at St Joseph on the 1st of July 1861 at 9 o'clock A. M., and was fourteen days and eight hours to the first station of the California telegraph line, which was then fifty miles east of Fort Churchill in Nevada, on its way eastward. The coach reached Placerville in seventeen days and four hours, bringing 2,100 pounds of mail, leaving four passengers at Salt Lake City, bringing one through, who proceeded at once to Portland by stage, a further distance of 750 miles.

At last the long wished for daily mail across the continent was an accomplished fact, and the people

were rejoiced accordingly. But during all the period of the civil war the Indians on the route, taking advantage of the employment of the army, were extremely hostile, and in 1864 succeeded in interrupting the mails for a period of four months, by murdering passengers and employés of the company, and destroying stations and property along the road, for which the government has since had to pay. During this period the Pacific Mail Steamship company carried all the mail matter, even for Salt Lake City and Denver, which was brought to San Francisco and sent east under the protection of the California volunteer cavalry, in the service of the United States. From April 1st to August 15, 1867, Holladay, contractor on the overland mail route, was robbed by the Indians of 350 head of stock; had twelve stations burned, with large amounts of hay and grain; had three coaches and express wagons destroyed, several passengers severely wounded, and thirteen of his employés killed outright.

The bill for extra service by the steamship company was paid in 1870, amounting to $21,543, which was in addition to the regular pay of $160,000 annually paid to that company for carrying printed matter, and such letters as were marked "steamer," as many were, the steamships carrying a large amount of mail notwithstanding the fact that the overland service was usually faithfully performed, and more quickly than the sea service.

In 1865 the Southern Overland mail was in effect revived, a route being established under an act of congress of the previous year, over which a weekly mail was carried from San Bernardino to Santa Fé. The connections at either end made it a through line from the Pacific to the Mississippi. It ran from Los Angeles to San Bernardino, crossing the Colorado at La Paz to Prescott, thence along the 35th parallel to Santa Fé, where it terminated by transferring the mail to the Kansas City line. The time consumed

between San Francisco and La Paz was from eleven to thirteen days, and between San Francisco and Prescott fifteen days. Shipments of ore from the Arizona mines first gave this mail line its importance, which steadily increased until the Southern Pacific railroad opened up the country, and transported both ores and mails.

The stage and mail routes north and northeasterly through Oregon, Idaho, and Montana became, by connecting with branch lines from the great central overland route, a part of it; but the settlement of the territories, creating imperative needs belonging to separate communities, has rendered necessary railroad transportation from a number of points up and down the Pacific coast, and the post-route is no longer thought of as a thing by itself.

The reflection which constantly occurs in recalling the circumstances in which California was formerly placed concerning its communication with the older states is that difficulties disappeared in the most marvellous manner as soon as it was determined to attack them. For how long a time it was the popular belief, maintained, too, by those best acquainted with the country, that the Sierra could not be crossed in the winter season with loaded wagons, or any wagons at all, and that no stage line could be operated on the central route except in summer? The mail was carried, as I have shown, on a man's shoulders from Genoa to Placerville. Yet when the people made up their minds to a stage line to Nevada they had it at once, and it was never discontinued. In the same manner a railroad was first denounced as impracticable, then attempted, and was a success from the inception to the completion. In truth, the route so long fought against has proven less liable to interruptions from climatic conditions than the southern line, which has to contend with sudden freshets of such power and extent as to cut off travel from a few days to several weeks at a time, year after year. It is true that the

obstacles to be overcome in crossing the mountains compelled first-class road-building in this portion of the central route; but it is also true that east of the mountains the road laid down was as slightly done as on the Southern Pacific, but no detentions were ever experienced from any cause except snow, which the snow-ploughs removed in a short time without injury to the road. Crossing the plains is a matter of five days instead of as many months, and the children of the pioneers have no knowledge of the rapid steps by which their fathers arrived at the condition of luxury by which they find themselves environed. Compared with other communities the men of the Pacific coast have experienced lives of great intensity; for

> "We live in deeds, not years; in thoughts, not breaths;
> In heart-throbs, not in figures on a dial."

Out of the great anxiety of the residents of California for a quicker means of communication than any which had yet been obtained arose that wonderful conceit, the pony express. To whom was due the credit of the original idea has been a matter of question; but according to Gwin, who in January 1855 introduced "a joint resolution for the establishment of an express mail, weekly, between St Louis, Missouri, and San Francisco," it was originated by B. F. Ficklin, general superintendent of the large freighting association of Russell, Majors & Co. of St Joseph, Missouri, and it must have been in contemplation as early as 1854, while according to all authorities its object was to demonstrate the entire feasibility of the central route.

The resolution proposed that the postmaster-general should be allowed to contract with the most responsible bidder who should offer to carry a letter express between St Louis and San Francisco in ten days, starting regularly once a week, and if failing from any cause to complete a trip in fifteen days, to forfeit compensation for that trip, the compensation not to exceed

$5,000 for each round journey. The president was to establish five temporary military posts at proper points on the route, which were to be selected by the contractor, who should have the right to occupy as much of the public lands at the stations along the line as was necessary, and a preëmption right to 160 acres at each station when the land came into market. The contractors should not be required to leave or receive letters at more than four intermediate points, nor should the postmasters at these places detain the express more than twenty minutes each. Not more than two hundred pounds of letters should be carried for the above-named compensation, but for an overplus there should be extra pay. A guard should accompany the mail through the most exposed portions of the route. The service was to commence within a year; and for three consecutive failures the contract should be annulled.

From Gwin's remarks on the bill I select a few. He said that the citizens of California and Missouri were ready to make such a contract, and to put such a line in operation in six months; that they were already moving in the matter of a mail stage route, and that the express would, with the aid given it by the government, enable the stage line to be safely operated; and he advocated the expenditure of $1,000,000 on a military road through the territories from Missouri to California; nor did he express any preference for one route above another. The resolution was referred, at his request, to the committee on military affairs, and not again heard from.

Indeed, when, in the effort to establish the central route, with which the subsequent settlement of the territories of Colorado and Montana had made the great freighting company better acquainted, the scheme of a pony express across the plains and mountains was broached, it struck the public mind not only as chimerical, but as something before unheard of, whereas the idea had been long entertained, not only by Fick-

lin, but by others who were looking forward to a daily stage line to California, to be followed in due time by a railroad. There was but one way to overcome the settled opposition of the south, which was to demonstrate that a mail could be carried uninterruptedly, and in less time than it was carried on the Butterfield route. An appeal to congress being useless at this period, the St Joseph company resolved to undertake the demonstration at their own expense.

In 1859 a company was formed at Leavenworth called the Leavenworth and Pike's Peak Express company, which opened a route up the Republican river to Denver. In the following year a new company was formed which embraced the eastern part of the old, that is Russell, Majors, Waddell, Jones, and Ficklin, and was known as the Central Overland California and Pike's Peak Express company. Its route was straight from St Joseph to Fort Kearny, and along the Platte to Julesburg, where it crossed the river and went to Fort Laramie, to Fort Bridger, Camp Floyd, and Salt Lake City. This company purchased Chorpening's mail contract, and continued the service. From Salt Lake City it continued west by a road through Ruby valley, and the Humboldt to Carson valley, and thence to Placerville, Folsom, Sacramento, and San Francisco. The contract was not worth much to the company except as a means of holding the route for future contracts, and as an adjunct, and a very important one, of the pony express. Ficklin was sent to arrange matters at Salt Lake City, while W. W. Finney came by sea to San Francisco to make the necessary arrangements here.

During the winter of 1859–60 ponies, or rather the tough and active native Californian horses, were distributed to the mail stations. At an expense of $70,000 provisions, men, and animals were placed along the road from St Joseph to Salt Lake City, and thence to California. The stations where ponies were changed were at first twenty-five miles apart, and

each rider rode seventy-five miles. Later the stations were placed nearer together. It was decided that the safest way to carry letters would be to adopt the Spanish mochilla, a heavy leather covering for the saddle, and to have a pocket in each of the four corners, in which the letters, none of which could exceed a half-ounce in weight, were locked, after being carefully wrapped in oiled silk to provide against wetting by submersion in streams or by pelting storms. The mochilla was transferred from pony to pony and carried through from beginning to end of the route. Five dollars in addition to the government postage was what it cost to send a letter by this novel method.

This enterprise was regarded in California with mingled doubt and hope. The time set for the start was the 3d of April, 1860. This is what the *Bulletin* said of it on that day: "From one o'clock to the hour of our going to press, a clean-limbed hardy little nankeen-colored pony stood at the door of the Alta Telegraph company's office—the pioneer pony of the famous express which to-day begins its first trip across the continent. The little fellow looked all unaware of his famous future. Two little heads adorned his head-stall; from the pommel of his saddle hung on each side a bag lettered Overland Pony Express. The broad saddle, wooden stirrups with immense flappers to guard the rider's feet, and the girth that knows no buckle, were of the sort customary in California for swift horsemen who appreciate mud. Readers who get early copies of the *Bulletin* may see the pony that will figure in congressional debates in the newspapers and in history, still standing at the telegraph office door. At a quarter to four he takes up his line of march to the Sacramento boat. Personally he will make short work and probably be back to-night; but by proxy he will put the west behind his heels like a very Puck, and be in at New York again in twelve days. At two o'clock the let-

ters he had to carry numbered fifty-two; probably his whole cargo will be seventy-five or a hundred letters, at five dollars each. Those in both pony and telegraph expect to be landed in New York in nine days after quitting San Francisco."

Such was the send-off of the first California pony. On the following day a telegram from Placerville announced that the time made from Sacramento to Placerville, fifty miles, was four hours, and that the pony left the latter place at forty-eight minutes past six o'clock in the morning, on its way over the mountains, flying.

After passing Carson, to which point the telegraph line extended, no more news could be obtained of the pony's progress, and California waited with anxiety to catch the first sound of hoofs from the other end of the line. It came on the 12th, when the wire flashed the intelligence of the pony's arrival from the east at Carson, and with news only nine days old. Wonder of wonders, and heart-stirring achievement! On the 13th the pony was at Sacramento, where the steamer, the swift *Antelope*, awaited his coming, and at a little past midnight landed him in San Francisco.

A certain arrival was quite a different thing from an experimental departure, as one may see by the language of the press. It took seventy-five ponies to do the carrying from the Missouri to the Pacific in ten and a half days, but the last one, which arrived on the *Antelope*, was vicariously loaded with the glory of them all. He was the veritable hippogriff which shoved a continent behind his hoofs with ease; which snuffed up sand-plains, tossed lakes, mountains, prairies, and forests, whirling behind him in an eastward rushing river; which left a wake like a clipper's, carried a bone in his mouth, and sent his fame rippling away north and south as nothing had ever done since the gold discoveries; which frightened whole tribes of Indians into believing him an arrow in the shape of a horse and rider whizzing past; which made

eagles and all swift-winged birds heartsick, and sent them into convention to devise methods to sustain their reputations; which crossed the railroad track fifteen miles out of Sacramento just as the train passed for Sacramento, and arrived in the city at the same moment! These were some of the newspaper remarks upon the pony's achievement.

It was announced at the theatres in the evening that the steamer would bring the pony, and the male part of the audiences, with some enthusiastic women, remained on the street after the performances were over to witness the arrival. The California band paraded the streets; bonfires were kindled; the Monumental bell rang out the fire companies, who, when they found no fire, joined in the demonstration. At midnight the procession had reached the foot of Broadway, where it waited, amusing itself with music, speeches, and jests, until the *Antelope* reached her wharf, when it re-formed, and opening right and left, with rousing cheers allowed the pony, a bright bay, to pass between the ranks. A halt was called in front of the Pony Express office, when a woman, tearing the ribbons off from her bonnet, tied them around the neck of the immortalized but no doubt weary little beast, which was after some further petting allowed to go to its stable, while the people went to their beds in the early morning.

The following table of the arrivals on the first trip out from the Missouri river shows the time made:

Left St Joseph, Mo.	6:30 P. M. on April 3d.
Arrived at Salt Lake City	6:30 P. M. on the 9th.
Arrived at Carson City	2:30 P. M. on the 12th.
Arrived at Strawberry Valley	4:35 A. M. on the 13th.
Arrived at Placerville	2:00 P. M. on the 13th.
Arrived at Sacramento	5:30 P. M. on the 13th.
Arrived at San Francisco	1:00 A. M. on the 14th.

At Sacramento the excitement was even greater than in San Francisco, and hundreds of people went out on the road to meet the express, while the town rang with jubilant noises of every description. It was on such occasions as these that the Californi-

ans showed their strong attachment to their former homes, as well as their appreciation of business facilities. To be only ten days from home—what unutterable joy! The difference between the east and west sections of the country was well illustrated in the letter-lists, the first pony from the east bringing but twenty-five letters. Not that there was this difference in the people, but in their circumstances. Those firmly settled amidst countless blessings could not see the benefit to be derived from letters costing over five dollars, when in a few days more the same news would be brought by regular mail. Even business men hesitated at the expense. It was California that felt and recognized the value of rapid communication most.

St Louis, of all the cities east of the Missouri, had the greatest interest in the overland express enterprise, and in May, after a few successful trips on the central route, it was proposed to establish a second line over the Butterfield route as soon as the telegraph between St Louis and Fort Smith, and between San Francisco and Los Angeles should be completed, and to run between the telegraphic points, 1,500 miles, in five days. This astonishing proposition was distanced by Russell and Majors, who announced that they would do the running on the gap between telegraph stations in four and a half days, if they had to build a telegraph line of their own, for the central route would not be permitted to fall behind any other; they had capital—a million of dollars to risk on it—and their actual expenses were $5,000 a month, but if the express should never pay they were able to run it for the glory, it being their purpose to establish their route on a firm basis, no such word as fail being known in their vocabulary. The more competition the better, said the Californians; this strife would lead to the discovery of new passes and cut-offs by which the long road would be shortened and made smooth; and people were urged to patronize the pony.

Copies of the principal newspapers were printed on tissue paper for transmission to the east by express, and news received in the same way, and only nine days old, was copied into the California papers.

It could hardly be expected that no interruptions should occur, in any case, to a one-man and one-horse express, passing over long stretches of unsettled country. But it so happened in 1860 that the troops in the Pacific division were withdrawn from the California, and even from the Utah stations, to fight Indians in eastern Oregon, leaving the overland route unguarded. There also occurred a brief war with the Pah Utes in Nevada, which was fought by volunteers. The excited state of the Indians, and the unprotected route of the express operated together to cause an interruption of several weeks in May and June, the stations between Salt Lake City and Carson having been destroyed, the employés killed, the stock stolen, one or more express riders murdered, and one mail entirely lost. These disasters coming upon the company before it had time to fix itself in the confidence of the people would, it was feared, defeat the enterprise, and loud was the lament which went up from the press in view of such a possibility. But no such result followed. The agent in California, assisted by the newspaper proprietors and business community, raised an armed company, and soon reëstablished the stations, and restored the service to its former condition. It was also increased to a semi-weekly service, with an increased efficiency as to time, the eastern news, by the aid of the telegraph from Carson, being frequently received when only six days old.

By one of those curious coincidences occurring in the history of California, upon which speculative thought is apt to linger, the pony express was started just at that juncture in our national affairs when news was most sought after and most exciting. It was scarcely established when it carried the intelligence

to Washington of the arrival of the Japanese embassy, giving congress time to make an appropriation, and send a steamer to the Isthmus to receive the distinguished visitors. In June followed the Charleston convention, with the subsequent events, so important in their bearing. A few months later came Lincoln's inaugural address, which was brought through in five days and eighteen hours, or as quickly as the railroad brings the mail now, and secret despatches to the military department, and in short, some of the most weighty matters in our history were intrusted to the safely locked mochillas of the untiring pony, the thought of losing which was as unbearable as would be now the thought of suspending all our railroad and telegraph service. The fact that private persons were bearing the expense, who might any day decide not to carry it longer without aid from the government, was frequently dwelt upon in the public prints, and Senator Latham made an effort to obtain some small government pay on condition of a certain amount of service performed; but the attempt was rendered abortive by the same influences which defeated the daily overland mail in 1860. Almost the only aid rendered was by the issue of army revolvers and cartridges to the express riders, with which to defend themselves, single-handed, against parties of well-armed savages. The expense to the express company of the Nevada Indian war in losses, and the cost of extra men as guards, was $75,000.

It was well understood that Russell, Majors & Co. were not keeping up so costly a service simply out of philanthropy, nor to show the world what they could do, but for the definite purpose of proving that the central was the best route for a daily mail, the contract for which they hoped to obtain. Had it not been necessary to continue the service one year in order to include the winter months, it probably would have been suspended when congress failed to pass a bill for a mail over this route. But the plucky presi-

dent maintained an imperturbable front in spite of losses and disappointment, in the expectation of winning in the end. And so far as proving his proposition was concerned he triumphed, it being evident that if a single horseman could force his way through the unbroken snows of winter, at the rate of from 120 to 150 miles a day, stages running from each direction daily would have no great difficulty in transporting mails and passengers over the route.

But in January, while these matters were pending, Russell, president of the company, fell into difficulty —if, indeed, it were not a trap set for him by the friends of the southern route. The company was largely in debt, owing about $1,800,000; and although a large company, and with considerable assets, was embarrassed to a degree which made borrowing necessary to a greater amount than was convenient. The government was also in debt to the company on its contracts, congress having failed to pass an appropriation bill. While Russell was in Washington endeavering to procure some relief, he was induced to take $830,000 in bonds of the interior department, as a loan, and giving as security acceptances on the war department furnished him by Secretary Floyd, a part of which were not yet due. The bonds, as it turned out, were stolen by Godyard Bailey, a family connection of Floyd's, and law clerk in the interior department. Both Russell and Bailey were arrested, and after a brief confinement in jail were bailed out by their respective friends. In the temporary confusion which followed the discovery of the fraud, Russell lost his opportunity, as, perhaps, it was meant he should, and congress in February authorized the postmaster-general to advertise for bids for a daily mail over the central route; but soon afterward, in March, it was enacted that the Overland Mail company on the Butterfield route should be required to move to the central route, as I have before related. The law demanded, also, that the contractors should, during

the continuance of their engagement, or until the overland telegraph should be completed, run a pony express semi-weekly, as Russell and Majors had done, carrying five pounds of government mail free, and charging their patrons not more than one dollar a half-ounce, the mail and express service to be performed for $1,000,000 annually. These matters were hardly arranged before the madness of secession and civil war banished all interest in merely personal matters, as in the case of Russell, and greatly diminished the importance of Pacific coast affairs in congress.

California, as it so frequently happened, was, however, in a muddle with the postal arrangements. The Southern Overland mail was ordered to be withdrawn early in April, and could not be established on the central line before the 1st of July. The old Chorpening contract was only continued by an extension of time to the 26th of June. The Pacific Mail contract would cease on the 1st of July. There would surely occur, from Indians or otherwise, a break in the overland service, which, if suspended, would suspend the pony express, as the stations of the company were necessary to the maintenance of the express, and so forth.

Some of these auguries failed. Arrangements were entered into between the two great contracting companies by which Russell and Majors retained possession of the western end of the route and besides a contract on the San Francisco and Los Angeles route; and the pony express, although the eastern division was soon sold to Ben Holladay, and run regularly, not only until the daily overland mail was definitely fixed on the central route, but until the overland telegraph was completed, October 24, 1861, shortly after which it ceased its long gallop and was heard of no more. It had already lost much of the favor with which it was first regarded, being never quite the same after the transfer to new parties. Yet some

months after its suspension the legislature of California protested against its stoppage, and the press declared it should be reëstablished, for with a daily overland mail and a through line of telegraph, California had less satisfactory communication with the east than when she depended alone on the pony express.

As to the merits of its founders, one cannot help feeling that Russell, Majors & Co. suffered a hardship in being deprived of the pecuniary reward of their generous enterprise, and the enjoyment of the applause to which they were fairly entitled, and which would have moved them to keep up their *esprit de corps*. But however this may be, and although while as an undertaking it was a success, yet, financially a failure, it formed a most interesting episode in the history of overland transportation, with a glamor of romance about it. For was it not a daily and hourly exhibition and repetition of the courage and endurance for which the poets have heaped honors on selected heroes whose services to humanity were no greater, perhaps, than those performed by the pony express?

A strict constructionist might exclude the telegraph from transportation methods and measures, but I must be allowed to treat these conveyances of intelligence that otherwise would be forced to be carried in the mails, as belonging to transportation—adjunctively, at least.

The telegraph, like the steamship, was in a state of development when California became United States territory. The pioneer line of magnetic telegraph in the world was established between New York and Washington in May 1844, but did not for a year or two come into public favor to any great extent. However, the company, which had a capital of $370,000, soon gained the confidence of the public, and their business became profitable. During six and a

half years, ending in July 1852, the receipts amounted to $385,641.42. In that year they sent 253,857 messages, the charges on which amounted to $103,232.37. They had seven wires in operation from Philadelphia to New York, and six from Philadelphia to Washington, and employed 125 persons on the lines, which were 275 miles long. In the mean time many other lines had been established in different parts of the United States.

California, which at first felt no interest in any news except states news, did not set up a telegraph at once, because it took some little time to get accustomed to the idea that the people had come to stay. They moved so rapidly from place to place, it would have been in vain to have set up telegraph poles in their wake, for by the time the operator was ready for messages the town would have decamped.

In May 1852, business having begun to settle down, and business centres to be pretty surely indicated, the want of rapid communication was felt, and there was chartered by a special act of the third legislature a telegraph line between San Francisco and Marysville, via San José, Stockton, and Sacramento, the exclusive franchise being granted to Oliver E. Allen and Clark Burnham, who were obligated to pay to the state three per cent of the net proceeds of their lines—which obligation, however, the company was released from in 1866; but nothing in the act was to be so construed as to prevent the construction of a telegraph line between the Atlantic and Pacific, showing the constant aspiration of the people for connection with their old homes.

Allen and Burnham were unable, owing to losses by the great fires of 1852, to complete their line according to the terms of the act, which required it to be in operation by the 1st of November 1853, and the company was reorganized under the name of California State Telegraph company. The first officers elected were John Middleton, president; directors,

Franklin C. Gray, John W. Dwinelle, Solomon A. Sharpe, A. J. Bowie, J. M. Estell, Lucien Hermann, of San Francisco; John A. Read, of Sacramento; John C. Fall, of Marysville; treasurer, Joseph C. Palmer; secretary, James C. L. Wadsworth. The superintendent was W. B. Ransom, and the contractor W. M. Rockwell. James Gamble had charge of the wires, and superintended the stringing of them, which was the beginning of his connection with telegraphy on the Pacific coast. The new company commenced operations September 13, 1853, working energetically to secure the franchise, and completed their line to Marysville, two hundred miles, on the 25th of October, six weeks from the day of commencement.

They had not the honor, however, of publicly setting in motion the first magnetic telegraph on the Pacific coast. This distinction was achieved by two members of the Merchants' Exchange—Sweeny and Baugh—on the 22d of September 1853. A line of wires had been extended some six miles from the Merchants' Exchange on Sacramento street to the outer telegraph station at Point Lobos, where, and also on Telegraph hill, were erected previously some old-fashioned revolving apparatus for signalling the arrival of vessels. In the place of these clumsy contrivances, Sweeny and Baugh established telegraphic communication by more modern means, and on the 23d celebrated the event by inviting the members of the San Francisco press to be present at the opening at Point Lobos; also the foreign consuls, Aikin for England, and Dillon for France. The operator was Henning, who "explained the apparatus to the assemblage." The proprietor of the *Commercial Advertiser*, then a leading journal of San Francisco, was accorded the privilege of sending the first message—a congratulatory one—to the office of his paper, and receiving the answer, on which cheers and champagne were indulged in by the assembled guests, and the telegraph was declared an institution of California. A fog-bell

was put up near the Point Lobos telegraph station by the owners of the line, to be tolled in foggy weather. Taken all in all, although an apparently small enterprise, this first short line of telegraph was of great importance to the commerce of San Francisco.

The second company incorporated was formed under the general laws of the state, and was known as the Alta California Telegraph company. It organized in September 1852, with a capital of $70,000, nearly all the stock being taken by January 1853. The election of officers in September of that year resulted in the choice of J. E. Strong, of Sacramento, president; H. R. Hawkins, of Auburn, secretary; B. F. Hastings, of Sacramento, treasurer; Ferris Forman, I. M. Hubbard, Vincent E. Geiger, of Sacramento, H. Davis, of Nevada City, J. Winchester, of Grass Valley, H. T. Holmes, of Auburn, George Woods and William Gwynn, of Sacramento, directors. This line was extended from Sacramento to Nevada City, via Mormon island, Diamond springs, Placerville, Coloma, Auburn, and Grass Valley, 121 miles, and completed for operation in January 1854.

At the time this line was being built there was in process of construction by its president, J. E. Strong, a line from Stockton to Sonora and Columbia, which was completed in December; and another from Mokelumne hill and Jackson, thus connecting all of the most important towns in the state. In 1855 the Alta California company determined to construct a line between Sacramento and San Francisco, crossing the strait of Carquines at Martinez, and coming down the eastern shore of the bay, which it crossed at Oakland.

This line was completed by means of submarine cables in 1856, and a branch extended to Vallejo in 1857.

The receipts per month of the Alta California company were ascertained to be $6,802, and its profits $5,132, or seven and a half per cent per month on its capital stock. That the business of telegraphy was

profitable was shown by the immediate payment of dividends, the California State company paying two on its net earnings before the 1st of April 1854. The rates, so far as I have been able to learn them, were two dollars for the first ten words, between San Francisco and Sacramento, and for every additional five words seventy-five cents. From Sacramento to San José the charge was a dollar and a half for ten words, and fifty cents for every five words additional. From Sacramento to Marysville or Stockton one dollar and forty cents for five words over ten words. In 1857 the officers of the California State company, whose headquarters were at San Francisco, were as follows: H. W. Carpentier, president; James Gamble, superintendent; J. C. Palmer, treasurer; C. C. Butler, secretary; Theodore F. Moss, E. D. Keyes, C. Ferguson, C. H. S. Williams, directors; John Leatch, agent. The capital stock of the company at this period was $300,000.

At the same period the officers of the Alta California company were D. W. Welty, president; J. Lambert, secretary; J. M. McDonald, treasurer and superintendent; J. H. Caruthers, P. A. McRae, J. M. McDonald, J. Lambert, directors. The principal office was in San Francisco.

In 1860 the State company absorbed the Alta California company, and was reincorporated in 1861. For several years it controlled nearly all the lines in the state or on the coast. In March 1858 the legislature granted a franchise for a line from San Francisco to Los Angeles, via San José, Santa Cruz, Monterey, and intermediate places, to Solomon A. Sharp, Leonidas Haskell, Robert H. Bacon, and James S. Graham. Taking the language of the act as an indication, there would seem to have been some abuse of power growing out of absolute monopoly, for the above persons were forbidden to show any favoritism in the sending of despatches, but to take them in their course, except where newspapers had a

contract for the transmission of news, or in case of war or other important matter, which might be taken out of the regular order of presentation.

In 1859 Los Angeles was put in communication with the other towns in the state. The line was constructed by F. L. Vandenberg, and ran along the Butterfield stage road from Los Angeles north. Los Angeles county subscribed about $18,000 to this telegraph line.

About the same time, or a little earlier, telegraphic communication with Yreka was established under the management of J. E. Strong and I. M. Hubbard; Case superintending the construction for the Marysville and Yreka Telegraph company, with a capital of $100,000. Yreka became a repeating station, the northern line being too long for a battery to work without the repeating instruments, after the extension of the wires to Portland, Puget Sound and Victoria.

Laying out and putting up telegraph lines in California in the fifties was a wild kind of life. The survey of the country proceeded slowly, people being less interested in lands than in minerals during the first decade. The telegraph was in advance of roads or settlements, for the most part, and the constructors were compelled to engineer their lines as well as to build them. The thing was regarded with much curiosity by the settlers, and particularly by the native Californians, who accounted for the wire strung on crosses by calling it a Yankee device to fence out the devil. When a certain devout Mexican woman of San José beheld them she exclaimed, "Well, I believe those Americans are becoming good catholics," in both of which surmises there was doubtless much comfort. These were some bits of fun for the brave men, mostly young, who encountered every form of hardship in the interests of civilization, finding their way across untracked wildernesses, through forests and jungles, over mountains and rivers, in heat,

cold, and every discomfort, often ill of fevers contracted in malarious districts, but never faltering in their duties.

The greatest undertaking of 1858 was that of the Placerville, Humboldt, and Salt Lake Telegraph company, organized in May at Placerville, with the design of constructing a telegraph line to Genoa in Carson valley, and thence to Salt Lake City. The company was composed of F. A. Bee, Frederick McCrellish, P. H. Lovell, F. A. Bishop, Mr Randall, and Mr Jones, and they constructed their line to Genoa that year, the first pole being erected at Placerville on the 4th of July. In the spring of 1859 the line was extended to Carson City, in 1860 to Virginia City, and subsequently to Fort Churchill. This line was frequently called Bee's grapevine on account of the manner in which it was sustained by being fastened to trees, which were often broken by storms, leaving the wire tangled in thickets by the roadside, where wagoners in want of the means of repairing their outfit confiscated it to their purposes, pretending to think it the design of the company in leaving it there. However, this line served a highly important purpose in the early days of Washoe, and finally formed the first division of the transcontinental telegraph.

Immortal should be the memory, it is said, of the man who first thinks any one fine thought, such cases being extremely rare. Many imagine their fine thoughts, if they have any, to have originated in their own brain, learning later that they are as old as Greece or Egypt. It was a brave boast of Puck's that he would girdle the earth in forty minutes, but only a boast, the imp never intending to attempt it. Moreover, his boast did not carry with it the conception of encircling the globe instantaneously with his brain products. Thought is not a girdle because it is intangible, therefore Shakespeare is not the father of this more modern conception, which cannot be

claimed without a suspicion of intentional imposition. But whoever in the restless night watches, while in the fever of invention, first scorched his soul in the insufferable gleam of such a revelation, the flash that went forth so simultaneously illuminated the imaginations of men that all at once it possessed the certainty of a demonstrable proposition, and was named by orators, poets, and statesmen as such.

In April 1852 Senator Douglas of Illinois presented a petition from Henry O'Reilly, "a man of great experience in the business of telegraphs throughout the United States," who proposed to establish a line of telegraph from the Mississippi valley to the Pacific. He asked no appropriation of money or land, only that he might be protected in his enterprise; and he also suggested that since a line of military posts across the continent had frequently been admitted to be indispensable, that they should be established, and the mail carried from station to station by the soldiers. It was intended to make an appropriation for this purpose, which, however, failed in the general scramble to secure money for other projects at the close of the session. From this time a transcontinental telegraph was a never forgotten subject of speculative thought, and the California senators were more or less diligent in introducing bills which for some reason never were passed.

In 1858 the Placerville and Salt Lake company sent one of their directors to Washington to endeavor to procure government aid in extending their line to Salt Lake City, or further east, and to interest eastern telegraph companies in their enterprise. Accordingly Senator Broderick in May 1858 introduced a bill authorizing the postmaster-general to contract with Henry O'Reilly, J. J. Speed, and T. P. Shaffner to carry government messages to and from Pacific stations for ten years for $70,000 per year, besides which the above named trio were to receive preëmption rights to 320 acres of land every ten miles on

the route pursued. Gwin was opposed to whatever Broderick favored, and the bill failed for the same reason that the central mail route failed in 1860.

Meanwhile influences had been brought to bear on the California legislature, which in April 1859 passed an act pledging the state to give a subsidy of $6,000 a year to any telegraph company that should first make connection with an eastern line, and $4,000 a year to the second company which should go through. Thus encouraged, the Placerville and Salt Lake company determined to win the prize, in spite of a rival, and a dangerous one, on the Butterfield stage route.

And here a general view of the telegraphic situation in the United States becomes necessary to the understanding of that which followed. The North American Telegraphic association, Amos Kendall president, was a league which determined all questions affecting the interests of telegraphy, including new lines and tariffs. All the companies in the United States were consolidated under eight different heads, or, as they were styled, nations. 1st. The American company, or nation, embraced all the lines in the Atlantic tier of states from Maine to Louisiana. 2d. The Ohio and Missouri company had for its territory the line of states from Ohio to Louisiana. 3d. The Western Union company was allowed to stretch its lines from Buffalo to St Louis. 4th. The Consolidated Pennsylvania company controlled all the lines in that state. 5th. The New York, Albany, and Buffalo companies embraced most of the lines in the Empire state in their nation. 6th. The Missouri company controlled all the lines within Missouri, Iowa, Kansas, and Nebraska. 7th. Illinois, Wisconsin, and Minnesota constituted a nation, owned by Caton. 8th, was a nation including Arkansas and Texas.

Now it was plain that the California companies must constitute a ninth nation, by leave of the league of the eastern nations, because, in order to make through connections to any of the important cities,

terms must be agreed upon beforehand, and consent must be obtained. The American company favored the southern or Butterfield route, probably under the instructions of Senator Gwin; while Hiram Sibley, of nation 3, was the staunch friend of the central route, as was Cyrus W. Field, although he belonged to nation 1. It was agreed, finally, in the North American Telegraphic association in 1859 that the central route should be adopted, and all that now remained was to secure the aid of congress.

In the session of 1860 several bills were introduced in the United States senate; but the one which, after many modifications, finally passed was presented by Gwin, and empowered the postmaster-general to contract with the Placerville, Humboldt, and Salt Lake company for the use of a line for ten years from San Francisco to Washington, which being referred to the committee on postoffices and post-roads, was greatly altered before being approved. This bill, which was ably advocated by senators Latham, Wilson, Seward, and Benjamin, and earnestly opposed by Senator Jefferson Davis, named the following corporators: Zenas Barnum, Thomas R. Walker, John H. Berryhill, Hiram Sibley, Norvin Green, John D. Caton, Frederick A. Bee, Charles M. Stebbins, and James S. Graham, most of whom represented great telegraphic companies. It gave to the corporators $50,000 annually for ten years, a right of way, the use of land for stations, and authority to charge four dollars for a message of ten words.

In the committee, of which Colfax was chairman, the subsidy was reduced to $40,000 a year, and in the house the charges lowered, after which he labored for it with much tact and industry. Conkling also befriended the bill, and Alley of Massachusetts; but the California delegation in the house did nothing to distinguish themselves or their state in this matter.

The bill, as amended, authorized the secretary of the treasury to advertise for sealed proposals, to be

received for sixty days after the passage of the act, for a line or lines, to be constructed within two years from July 31, 1860, from some point on the west boundary of Missouri, by any route the contractors might select, to San Francisco, for use by the government for a period of ten years. No preëmption right to lands was accorded, though permission was granted to the successful bidder to use for ten years such unoccupied public lands as should be necessary for the right of way, and for the establishment of stations, not exceeding one in fifteen miles on the average of the whole distance. The government was always to enjoy a priority of use of the line, which was to be free to its demand until, at the ordinary rate of private messages, the amount reached $40,000 a year, when the excess should be certified to congress by the secretary of the treasury. The coast survey, Smithsonian institution, and National observatory were secured a free use of the line forever; and to the government was reserved the privilege of connecting the line with any of its military posts. The contractors had the right to the same terms whenever the line should be extended to Oregon. No contract with the government for the subsidy was to be made until the line was in actual operation, and payments should cease whenever the contractors failed to comply with their agreements. The charge for a single message of ten words should not exceed three dollars, with the usual proportionate reductions upon despatches of a greater length.

Although according to the wording of the act the contract should have been made with the lowest bidder, provided it did not exceed $40,000 per annum for ten years, it actually fell to the highest bidder, Hiram Sibley, representative of the Western Union Telegraph company, or nation 3, which bid $40,000. The other bidders were B. F. Ficklin, $35,000; Theodore Adams, $29,000; and Harmon and Clark, $25,000; but before the time came for giving bonds

these latter parties had withdrawn, and the highest was also the lowest bidder.

Meanwhile the North American association had agreed in convention at New York that as the Western Union company had more at stake than any other in the confederacy, the whole matter of the overland telegraph should be referred to it, and to the Placerville company. The parties represented by Sibley met at Rochester, New York, and agreed that if all the California telegraph lines would consolidate, with a capital of $1,250,000, they should, under the name of the Overland Telegraph company, have the construction of the line from Salt Lake to the Pacific connection; while the Western Union company, under the style of the Pacific Telegraph company, chartered by the Nebraska legislature, with $1,000,000 capital, should have the construction of the line from Salt Lake City to the eastern connection; and the subsidies offered by California and the general government should be shared equitably between them.

Upon this understanding J. H. Wade and A. W. Bee proceeded to San Francisco to effect the consolidation of the California companies, which took place in March 1861, H. W. Carpentier being elected first president of the Overland Telegraph company, and James Gamble general superintendent, and the Placerville, Humboldt, and Salt Lake company receiving $80,000 in stock of the consolidated company for property in hand which went into the concern. Work was commenced in May. East of Salt Lake City the construction was under the charge of Edward Creighton; from Salt Lake City to Ruby valley James Street had supervision, and from Ruby valley to Carson J. M. Hubbard was in charge. The line from Placerville to Fort Churchill was reconstructed, and the whole completed from Carson and Omaha to Salt Lake City between the 27th of May and the 24th of October 1861. The probable cost of construction was less than half a million dollars. The line followed

the stage road, and was in use until the completion of the Central and Union Pacific railroads and telegraph lines, or less than eight years. Its subsidies must have nearly, if not quite, defrayed its first cost, although it was primarily entirely built by private enterprise. The first despatch which came over the wires from Salt Lake City to San Francisco was accorded by the courtesy of the president of the company to Brigham Young, in reply to the following:

To Hon. Brigham Young, Great Salt Lake City: That which was so long a hope is now a reality. The transcontinental telegraph is completed. I congratulate you upon the auspicious event. May it prove a bond of perfect union and friendship between the people of Utah and California.

H. W. CARPENTIER.

To this Young replied:

To Horace W. Carpentier, President of the Overland Telegraph—DEAR SIR: I am very much obliged for your kindness, manifested through you and Mr Street, in giving me privilege of first message to California. May success ever attend the enterprise. The success of Mr Street in completing his end of the line under many unfavorable circumstances, in so short a time, is beyond our most sanguine anticipations. Join your wire with the Russian empire, and we will converse with Europe.

BRIGHAM YOUNG.

Immediately following these courtesies, Street telegraphed the following:

Colonel Baker was killed in the battle on the 21st while in the act of cheering on his command. Intense excitement and mourning in Philadelphia over his death.

Direct communication with New York was not established until the 6th of November. Thus was California brought close to the red field of war, and made to participate in the daily anxieties that tried men's souls for the next four years.

It was the original intention to make St Louis the eastern terminus or distributing point for Pacific news, but the tumult of rebellion that swept through the border states made it obligatory to fix upon some free-state centre, and Chicago was substituted, taking the route away from the cities along the Ohio river, and placing it along the great lakes.

A large business was done in telegraphing for the first few days, at one dollar a word, no attention being paid to the clause in the act of congress fixing the

charge at three dollars for ten words. But within a week after opening the line through to the east, the following rates were established: To St Louis from San Francisco for the first ten words five dollars, and each additional word forty-five cents; to Chicago, five dollars and sixty cents, and fifty cents for every additional word; to New York or Washington, six dollars, and seventy-five cents for each word over ten; to Boston, seven dollars, and for additional words sixty cents each. In the ten words were included the name of the place from which the despatch was sent, and the month and day when it was sent. This left seven words for a message at seventy-one and three-sevenths cents per word. The sending of the president's annual message cost $600 to the California press. At this rate the rich only could afford to use the telegraph, and the state and government were subsidising a luxury in the interest of capitalists; that is, the people whose money constructed the telegraph, or paid for its construction, were allowed no opportunity to be specially benefited by it. There never has been any second or third class telegrams, as there has been postage and railroad steamship fares. The indirect great benefit that the telegraph was to every person on the Pacific coast did not give the proprietors the right to withhold the blessing of its particular use. But it is slow teaching men that they own nothing, except by the consent of their fellows; that they came naked into the world and go out of it with nothing, leaving to whoever is fortunate enough to seize them their brief possessions.

Complaint being made of the abuses practised by the Pacific company, there was talk of a revolution of the government subsidy, in 1863, which threat called forth a memorial to congress from the overland company of California. According to this memorial, the net profits of the overland line, including subsidy, had not exceeded $20,000 in the fifteen months it had been in operation. The memorial seemed to regard

this as a very insignificant return for the investment of $240,000, petitioned not to be deprived of its privileges, and complained that for dividends the company was compelled to depend upon its local business, the overland line being valuable chiefly as security against competition. That was a corporation view of the case. Writers on the subject say that "no line ever constructed on the continent became so immediately and largely profitable."

Out of one monopoly grew another. A few newspapers in San Francisco and Sacramento made an arrangement with the overland company whereby only those in the combination could receive the news at first hand. When Conness was in the senate he made a movement to break down the associated press monopoly of telegraphic despatches, and to have public news delivered to all public journals at two cents a word. The associated press fought him, as, of course, they would, since their monopoly of news compelled all the world to buy their publications; but the principle he advocated was the right one.

It will be remembered that the California law which gave $60,000 in ten yearly instalments to the first overland telegraph company offered $40,000 to the second in ten yearly payments. Congress in 1860 was asked to grant a franchise for a telegraph through Missouri, Arkansas, Texas, and Arizona to Los Angeles, in California, to James M. Hughes and J. J. Mudd, but the committee to which it was referred suffered it to be forgotten. However, the Missouri company, or nation 6, ran their line west to Fort Smith on the Butterfield route, and also a direct line to St Joseph, but the Los Angeles, or Pacific and Atlantic, line, having been merged in the State Telegraph company, and thus in the overland company, and the breaking out of the war having put an end to telegraphic construction on this line, it was many years before the fifteen-hundred-mile gap between

Fort Smith and Los Angeles was set with poles and spanned by telegraph wire.

The flood of 1861–2 was very destructive to the State company's lines in California. The whole Sacramento valley was a sea, troublous, and dangerous to navigate. Street and Ladd claimed to have accomplished the longest land voyage in boats ever made in their efforts to repair the mischief done by the deluge. The story is, indeed, great and pathetic. They left Stockton in a Whitehall boat, rigged for sailing, and bore away west by north toward Sacramento. The wind blew stiffly, and the current was dead ahead, the sea running wild, and the waves frequently dashing into the boat, the water being from three to thirteen feet in depth, and the telegraph poles being in places submerged to within a few feet of the top. Near Mokelumne City, at a place where there was a slight depression in the earth, the boat sailed over the wires! In this vicinity there were frequent breaks of from three to twelve poles, aggregating several miles, and as the country was a waste of waters it was impossible to replace them. The design of the navigators was to have gone to Sacramento, but wind and current being adverse, they were compelled by the force of the latter to turn back when within ten miles of their destination. Going with the current was even more dangerous, if less difficult, for the stream ran with greater rapidity out of the channel than in it, and it was not always possible to keep to it, or even to tell where it was. Reaching Rio Vista, near the junction of the San Joaquin, they were able finally to board a steamer for San Francisco.

The most important movement of the State Telegraph company after the completion of the overland telegraph line was to extend a line to Portland, which was completed in March 1864, and continued to Olympia and Seattle, and thence to Victoria by submarine cable, in 1864–6.

The labor of constructing this northern line was

much greater than that of the overland telegraph, or rather, it was of an entirely different nature, involving more personal exertion and risk than the line through an open country. In one case the material had to be transported long distances, and the work of supplying poles was given out to contractors. In the other, one of the greatest difficulties to be overcome was the too great amount of timber on the route, and the necessity of opening roads and bridging streams in order to pass the wagons with supplies and wire. When the construction party entered Olympia, September 4, 1865, it had built 120 miles of line and 40 miles of road in the previous sixty days. On the following day it started for more northern regions, being delayed by want of material for the line, and taking forty days to Seattle. From this point the weather was inclement, the country devoid of roads or settlements, and wagons useless. They were accordingly abandoned, and the small British steamer *Union* became the base of supplies, as the party skirted the eastern shore of Puget sound and the gulf of Georgia, having to carry poles and wire through thickets, over rivers, and while clambering cliffs or sliding down slippery declivities, for a distance of 200 miles to Fraser river. Such was the determination of the builders that 400 miles was constructed in nine months, 300 miles being through a forest unsurpassed for density on our continent.

On arriving at Fraser river the cable designed to connect the line with Victoria was not in readiness—in fact had been lost with the ship containing it, off Cape Horn, and it was not until November 1865 that a second cable reached Esquimalt, when it was laid with all possible despatch, the colonial government placing the gunboat *Forward*, Lieutenant Fox commanding, at the disposal of the company. The line between Portland and Victoria, in a distance of 346 miles, crossed fourteen rivers. This line, on account of the features here described, was the most

expensive one on the whole continent, and the most difficult to maintain; but the company asked for no aid from any of the business communities on its route. The enterprise was conducted by R. R. Haines and F. L Vandenburg.

The legislature of 1863 granted to John B. Watson and assigns a franchise to put in operation a line from San Francisco to Unionville, in Nevada, by Napa City, Virginia City, Carson, and Dayton. This franchise was revoked in 1868. A charter was also granted to Watson to construct a line from San Francisco to Crescent City, via Petaluma, Santa Rosa, Healdsburg, Ukiah, and Eureka. In 1864 the State Telegraph company completed a line to Humboldt county, from which it would appear that Watson's franchise had been assigned to that corporation. This company also found means to purchase in 1864 the material of the Independent Continental Telegraph company, organized in 1863, and which had commenced and partially constructed a line from San Francisco to Salt Lake, via a submarine crossing at the Golden Gate, to Sacramento, Placerville, Virginia City, and Reese river, with the intention of connecting with the independent line on the Atlantic side. Louis McLane was the principal capitalist of this undertaking, and James Street manager. In September 1865 the United States Telegraph company commenced the construction of a telegraph line from San Francisco to the Missouri river, which had been completed to Salt Lake City in January 1866. It was consolidated with the Western Union very soon after the purchase and lease of the State Telegraph company's stock and property. These transfers answered a query of a popular journal of the day, which asked to know if the precedent established on California rivers, of the greater the number of boats and companies, the higher the rates, was going to be followed by the telegraph companies. The multiplication of

companies was not going to be allowed to lower the rates to the reduction of dividends.

The legislature of 1866 granted a franchise to Benjamin Flint and Jotham S. Bixby to construct a line of telegraph between San José, San Juan South, Paso Robles Hot springs, Santa Margarita, San Luis Obispo, La Potero, Santa Bárbara, San Buenaventura, Los Angeles, El Monte, and San Bernardino. The capital stock of the company was $150,000, divided into 300 shares, owned principally by Thomas Flint and William E. Lovett of San Juan, P. W. Murphy of Santa Margarita, and A. Wiley and Walter Van Dyke of San Francisco.

But whatever lines were projected soon came into combination with the State Telegraph company which itself combined in 1866 with the Western Union company. In January 1867 the Western Union took direct control of the Pacific coast lines, which in May of that year were formally leased to it. Previous to the lease being executed, the State Telegraph company elected as its president George H. Mumford, of the Western Union, who had been sent to California in 1864 to look after its affairs. Henry Haight was chosen vice-president, George S. Ladd secretary and treasurer, and James Gamble general superintendent. Mumford was still a young man, being born in 1840 at Rochester, N. Y. He died in Paris in 1875 much regretted by the telegraphic fraternity.

It was regarded as a promise of relief when the Atlantic and Pacific States Telegraph company represented by D. N. Barney, Henry Morgan, Lewis Roberts, W. H. Platt, and their assigns, and chartered by the legislature in 1866, entered the field as competitors for the telegraphic business of California. Their line ran by the way of San José, Stockton, Sacramento, and Marysville, and thence east to a connection with the lines in the Atlantic states. They were no sooner fairly under way in 1868 than they were enjoined by the Western Union company, who

also sued them for damages in the amount of $50,000, alleging in their complaint that the legislature of 1852 gave the company of which they were the assigns an exclusive right upon certain routes within the state, and forbade anyone to molest or destroy any of their posts or wires, whereas the new company had constructed a telegraph line in close proximity to theirs, and had in many places removed their posts, erecting them in other places, and that by reason of these proceedings the insulators on their line became deranged, and their business was injured, for all of which the court was asked to award them the sum named, to enjoin the intruding company and to compel the removal of its line. The Western Union—although its suit was denied, and notwithstanding that the chamber of commerce of San Francisco and the San José railroad company, which had given the new telegraph company leave to erect its poles on the line of its road, as well as public sentiment generally, sustained the Atlantic and Pacific company against the monopoly—by means that were best known to itself removed its rival even after the new line was completed to Sacramento.

About this time a demand was made on congress to enact a postal telegraph law, fixing the cost of telegraphing at one cent a word; and telegraphic monopoly was everywhere cried out against. The nearest approach to interfering with the despotic ukases of powerful corporations which congress did enact in these times was contained in an act to aid in the construction of telegraph lines, and to secure their use for postal, military, and other purposes. That act declared that any telegraph company, organized under the laws of any state, should have the right to construct and operate telegraph lines through any portion of the public domain along any military or post roads, and across any navigable streams, provided that navigation was not obstructed or travel interrupted; and wood, stone, and other material

might be taken from the public lands for the construction of telegraph lines; but the rights and privileges so granted should not be transferred by any company availing itself of them, to any other corporation or association; and the United States might, at the expiration of five years from the date of the act, purchase all the telegraph lines and properties at an appraised value to be ascertained by a competent commission. Before any company should exercise any of the privileges conferred, it should file its written acceptance with the postmaster-general of the restrictions and obligations of the act. This was legislation aimed at combinations, and the practice of soliciting franchises only to sell them out to wealthy companies; while the threat by the government to assume control of all telegraphic lines was a clear intimation that private companies were not doing the best possible for the public convenience.

When in 1858 the ocean telegraphic cable was successfully landed on the shore of New Foundland and a message sent through the deeps between the heads of the British and United States governments, California was as enthusiastic in celebrating the event as if it had more nearly concerned her, because it was regarded as a promise of the overland telegraph, and eventually of an ocean line to the Hawaiian islands, China, and Japan, a preliminary survey for which was made between Honolulu and San Francisco by Lieutenant Brooke of the United States navy in 1857, with an improved apparatus for taking soundings that was invented by Brooke himself. But while at Hakodadi in Japan a severe earthquake was followed by a tidal wave which carried the surveying schooner *Fennimore Cooper*, and a Russian frigate, high up on the shore, where they were broken up, after which nothing further was heard of submarine explorations. It was made known, however, that about 300 miles west of the Golden Gate, and parallel with the Coast range and the Sierra Nevada, was a submerged

range of mountains, the tops of which were at a depth of two miles. Beyond these mountains the bed of the ocean was a nearly level plateau extending almost to the Sandwich islands. From these facts it was apparent that there would be less difficulty in laying a cable from California to the Islands than between New Foundland and Ireland. But had the difficulty been twice as great, California would have found in that no reason for abandoning an idea once entertained; and from time to time the San Francisco press devoted considerable space to advocating a submarine telegraph to China. Indeed after the failure of the first Atlantic cable, I find the California papers saying that by joining with the Russian government in completing a line from St Petersburg to San Francisco via the mouth of the Amoor river and the west coast of America, San Francisco would be placed in the position to which New York aspired through the the Atlantic telegraph of being "the centre of the intelligence of the world."

"What a brilliant future," said the Sacramento *Standard*, "do these reflections open to view. There is nothing visionary in them. The Asiatic telegraph is the most feasible enterprise of that character that has ever been proposed. More gigantic undertakings have been accomplished. In some quarters the opinion is now entertained that it is only by the Asiatic route that telegraphic communication can ever be established between the old and the new worlds. There exists at least a doubt about the success of a submarine cable laid along the bed of the Atlantic. . . . If this should turn out to be correct, San Francisco, by the instrumentality of the Asiatic line of telegraph, will take the place of New York, and will in after years be the point from which the latest news from the old world will be transmitted to all parts of the United States." It is well to dream nobly, if we dream at all.

The Russian government in 1860–1 was engaged

in extending a telegraph line from Moscow to the Pacific, so as to connect Europe and eastern Asia, and possibly the west coast of America via Bering strait. This line was carried to Peru on the border of Siberia, thence across the Ural mountains to Omsk on the river Irtish, and thence to Tomsk and Irkutsk, after which it passed the Altai mountains to Kiakhta on the frontier of China, and thence was contained to Cheta on the Amoor river, terminating at Nertchinsk. It was intended to construct a branch down the Amoor to its mouth, and other branches also; but it was with the Amoor extension that Californians were desirous of making a connection by cable with some point on the northern coast of America.

Perry MacDonough Collins of California, American commercial agent to Russia, opened a correspondence with the governments of Russia and Great Britain to obtain the right of way, with other privileges, in the British possessions and Alaska, which were readily granted. He was encouraged by the Western Union company to apply to congress for sanction, which was given in a bill passed in June 1864, granting a permanent right of way, with timber and stone, and as much land as required for stations; and the secretary of the navy was authorized to furnish a steam or sailing vessel to assist in surveying, or laying cable, or to promote in any way the success of the undertaking. The government was bound to protect the line from injury by savages, and commanders of military posts were to be instructed accordingly. The government was to have the first right in the transmission of despatches; the rate of charges should be fixed by a convention between Great Britain, Russia, and the United States; and it was provided that the owners of the line should not make any contract, directly or indirectly, with any newspaper or association of newspapers to transmit despatches to them upon terms different from those open to all other newspapers or associations. To this extent, at least,

congress interfered to prevent combinations against the public interest.

Collins, in his correspondence with Sibley of the Western Union, endeavored to get him committed to his scheme of communication through Russia with Europe, and with Asia. Nor was it difficult; for, as Sibley wrote, "Our men are pressing me hard to let them go on to Bering strait next summer, and, as you say to me, if I had the money I would go on and complete the line and talk about it afterward. . . . No work costing so little money, was ever accomplished by man that will be so important in its results."

On the 28th of September, 1863, Collins formally submitted a proposition for the construction of the Russian-American telegraph to the Western Union company, renewing it in March 1864. It offered, if accepted within twenty days, to transfer his rights and privileges obtained under the Russian and British governments, to the company, and this offer was accepted, following which congress passed the act above referred to.

The grant of Russia was very liberal, engaging to construct a line of 7,000 miles to meet the American line at the mouth of the Amoor river, the right of way through Siberia being accorded. A rebate on messages of forty per cent should be allowed for a length of time to be subsequently agreed upon. The agreement of Collins with the Western Union secured him one-tenth of $1,000,000 of the stock to be created for the enterprise, free from assessment; the right to subscribe for one-tenth more; and the payment of $100,000 as compensation for eight years' service in securing the grants. The whole stock, consisting of 20,000 shares at $100 each, was immediately taken, and considered to be very valuable. No time was lost in commencing the work, which was only an extension of the northern line already completed as far as British Columbia. The expeditions as organ-

ized consisting of the following divisions under Charles S. Bulkley, engineer-in-chief:

LAND SERVICE.

Frank N. Wicker, Chief.
Henry P. Fisher, Surgeon-in-chief.
Scott S. Chapel, Chief Q'trmaster.
George M. Wright, Adjt. and Sec.
John F. Lewis, Chief Draughtsman.
Frederick Whymper, Artist.
Eugene K. Laborou, Ch'f Interpret'r.
Lawrence Conlin, Chief Carpenter.

AMERICAN DIVISION.

Edmund Conway, Chief.
J. W. Pitfield, Agent B. C.
Henry L. Pope, Chief of exploration in British America.
J. Trimble Rothrock, First Asst.
James L. Butler, Second Asst.
Ralph W. Pope, Operator.
F. A. A. Billings, Asst. Q'trmaster.
Henry Elliott, Clerk.
Robert Kennicott, Chief of explorations in Russian America.
W. H. Ennis, First Asst.
Thomas C. Dennison, Q'trmaster.
Lewis F. Green, Engineer.

SIBERIAN DIVISION.

Serge Abasa, Chief.
George Kennon, Quartermaster.
J. A. Mahood, Chief of explorations in Lower Siberia.
Collins L. McRae, Chief of Explorations in Upper Siberia.
A. S. Arnold, Quartermaster.
Alexander Harden, Interpreter.

Richard J. Bush, Secretary.

The Marine Service, organized early in 1865, consisted of the flag-ship *Nightingale*, Captain C. M. Scammon; steamer *George S. Wright*, Captain W. H. Marston; bark *Clara Bell*, Captain John R. Sands; bark *H. L. Rutgen*, Captain M. Anderson; schooner *Milton Badger*, Captain T. C. Harding; bark *Palmetto*, Captain Arthur; *Golden Gate*, Lieutenant Davidson, and bark *Onward*. Three small steamers for use on rivers were constructed. Four other vessels, the *Evelin*, *Wood*, *Egmont*, and *Royal Tar*, carried material to the several stations. The United States government furnished the steamer *Saginaw*, and the Russian government the royal steamer *Variaz*, besides which seven other vessels and steamers were employed, all armed for protection against the Indians.

The line to be constructed would cover 2,800 miles, and two deep-sea cables, one of 178 miles, across Bering sea, and another of 209 miles, across the bay of Anadir, were required; but the talent, the money, and the energy enlisted promised a brilliant success. The interest in this undertaking was national and world-wide, and under the influence of the prevailing enthusiasm the stock of the company advanced until it was held at a premium of from thirty to sixty per cent.

On the 7th of March, 1865, the United States steam cutter *Shubrick*, having on board General-superintendent Bulkley, Henry P. Fisher, a corps of draughtsmen, and others, proceeded to Sitka, via Vic-

toria and New Westminster, where James Gamble was to decide upon the best crossing of the marine cable to connect Victoria with the Oregon line. The *Shubrick* left Fisher at Sitka to gather information concerning the interior, and to have maps prepared for the use of the expedition. When preliminaries had been settled, the *Shubrick* returned to San Francisco, whence the main expedition sailed, July 8th, for the northern seas. The summer was spent by Bulkley in sounding the Bering strait with the steamer *George S. Wright,* and in getting a knowledge of the geography of the Asiatic and American coasts. The survey was completed in September, when the *Wright* reached Plover bay. Kennicott was to have explored the route from the mouth of the Yukon southward, going up that river in a small steamer constructed for the purpose, and travelling inland to meet a party from British Columbia. His death from heart disease suddenly terminated an honorable career. But the labors of his associates continued. During the winter the shore parties explored, with the help of reindeer, dogs, and sledges, the entire route of the telegraph line, with the exception of three hundred miles in Russian America, the mercury being forty degrees, and even fifty-five degrees below zero.

Stations in northeastern Siberia and northwestern America were constructed, poles set, the wires strung, and supplies distributed along the line in the following summer. Before the season closed in 1866 the material for the whole work was *in situ*, and there was every reason to believe that 1867 would witness its completion, as fully half the line was already up, and the north and south parties approached so nearly that during the winter communication was opened between them No incidents going to show that unusual hardships would be habitually endured by persons in the service of the telegraph company occurred, except that the *Golden Gate* was cut through by moving ice off the mouth of the Anadir river in

the month of October, and her officers and crew, with the Western Union men at that place, were compelled to winter in houses made of telegraph poles and chinked with turf. But as the vessel's stores were landed, and game was plenty, no suffering was brought on from this accident; and although the cold was intense the men contrived to work and play as occasion required or suggested. About 8,000 poles were cut and rafted by a party of fifteen, whom Captain Scammon sent up the river on this duty. All the fleet except the *Golden Gate* returned safely to San Francisco to winter.

At this stage of the undertaking there occurred an unexpected event, which was no less than the successful laying of the sub-Atlantic cable. Since the failure of the first sub-Atlantic cable the expectation of its final success had died out of the public mind, which received the intelligence of its complete achievement with surprise as well as joy. The surprise of the Western Union company was dashed with disappointment, for the success of its great telegraphic scheme was predicated upon the idea that cables could not be successfully laid on the bed of the Atlantic; but now that this was proved untrue, it was a very simple proposition that two thousand miles of ocean cable must have a vast advantage over sixteen thousand miles of land lines, a large part of which was along an uninhabited coast. At a meeting of the company in the winter of 1866 it was resolved to recall the Russian-American telegraph expedition, which was done accordingly the following summer, after the 800 miles to Skeena river had been completed.

The loss to the company was very great, and bonds were issued for the redemption of the stock to the amount of $3,170,292. It was a severe test of the strength and resources of this association, but it paid this enormous bill without reducing the market value of its stock. It was, also, a remarkable example of

the manner in which private undertakings on a grand scale have redounded to the glory and advancement of our country. Who knows that the scheme of a Russian-American telegraph did not suggest to Secretary Seward the purchase of Alaska with its enormous natural resources? He was always the firm friend of the enterprise, and when it was at last abandoned wrote to the vice-president of the Western Union, "I do not believe that the United States and Russia have given their faith to each other, and to the world, for the prosecution of that great enterprise, in vain."

As for Mr Collins, he said in January 1869: "That the overland route, or rather that portion of it left unfinished by the Western Union company, has been abandoned, is true, but the general proposition of connecting our Pacific coast with Asia has not for a moment been abandoned by me. Under the grants to myself by Russia, Great Britain, British Columbia and the United States, more than one-half of the overland line and its connections has been constructed. First, on the American side up to within 260 miles of Sitka, in Russian America; and secondly, on the Asiatic side continuously, except one section on the Amoor river, for the construction of which all the materials are now on the ground, on to Europe, across the whole of Asia."

What was the loss of the Western Union company to the disappointment of this man! Long ago all that was perishable of the company's work has been destroyed. If ever we have a telegraph to Asia via Bering sea it will be one accompanied by a railroad to Alaska, which, indeed, is already spoken of. But in the mean time the world has been deprived of this important line of communication because the builders would not consent to compete with the shorter cable to Europe, preferring to sink a few millions outright, to giving mankind the benefit of a work nearly completed, at a rate less than the high one in contemplation. Had the government interposed at this period,

after purchasing Alaska, and taken in charge the Russian-American telegraph, might it not have had a very telling effect upon the commerce of the west coast?

The action of congress in requiring the railroads enjoying grants under the government to erect telegraph lines took from the Western Union the control of the central transcontinental route in 1869, when the Central and Union Pacific railroads were completed. F. S. Vandenburgh entered the service of the Central Pacific Railroad company in 1866, and remained superintendent of the telegraphic department to the present time. The lines of this company were subsequently operated by the Atlantic and Pacific Telegraph company, which contracted for them in 1874, and which, in 1878, combined with the Union Pacific as mentioned below.

In 1870 San Diego was put in communication with Los Angeles, and a line extended northward through San Buenaventura to Santa Bárbara. In the same year the counties of Mendocino, Humboldt, Klamath, and Del Norte were authorized to issue bonds for the construction of a telegraph, but the act was repealed in 1874, no line having been constructed. In 1872 a line was built between Stockton and Visalia. The government in 1873 completed 600 miles of telegraph line in Arizona connecting with San Diego, the work being done under the superintendence of R. R. Haines of the Western Union. Mr Haines also constructed the coast line between Salinas and Santa Bárbara in 1874. Telegraphic communication with Yuma was established in 1877 by the Southern Pacific Railroad company. The following year a line was completed to Bodie. Thus, year by year the ends and bounds of the state have been brought together, until every part can now be reached by telegraph.

The Western Union is the local telegraphic power in the state. The company has a remarkable history. It was organized in 1851 with a capital of $350,000,

which had grown in 1877 to $41,073,410, of which the company owned $7,255,335. Its bonded debt amounted to $7,239,038. Its dividends were six per cent per annum, or one and a half quarterly. It had in operation 76,955 miles of lines, on which were stretched 194,323 miles of wire, and its offices numbered 7,500. Its gross earnings in 1877 were $9,812,-352.61. It employed 9,950 persons, 750 of whom were women. The amount of money transfers in that year were 38,669, and the amount transferred was $2,464,172.82, the profit from which was $92,364.93. The number of messages sent was 21,158,941; average toll per message was 43.8 cents; average cost 29.8 cents; and average profit 13.8 cents. The decrease in tolls in the ten years preceding was 61.6 per cent.

In 1878 an arrangement was entered into with the Atlantic and Pacific company for pooling the gross receipts of the business of the two companies, and dividing them on the basis of 87.5 per cent to the Western Union and 12.5 per cent to the Atlantic and Pacific. Of the Atlantic and Pacific outstanding capital of $14,000,000, the Western Union purchased $7,250,000. This practically restored the central overland line to the Western Union.

Of submarine telegraphs there are none landing on or leaving the Pacific coast, but all despatches from the western side of the Pacific ocean reach California by way of Europe, the Anglo-American or other cable, the overland telegraph, and a cable under the waters of the bay of San Francisco.

This is not according to the desire of Californians, who have always had periods of revival of interest in a Pacific submarine telegraph to the Hawaiian islands, Japan, China, and Australia. In 1874, at the suggestion of Cyrus Field, the United States steamer *Tuscarora*, commanded by G. E. Belknap, was detailed to make surveys and soundings from the coast of California to Japan and the Asiatic continent prelimi-

narily to the laying of a Pacific cable. The course of the survey ordered was for a route through Puget sound and via the Aleutian islands. Returning to San Francisco for coal, the steamer received orders to go southward and survey the route from San Diego to the Sandwich islands and Japan, taking the northern route on the return voyage.

Captain Belknap followed instructions, running a line of soundings from Puget sound to San Diego, thence to the Sandwich islands, and from there to Yokohama. His proposed return was on the line of a great circle passing through the Aleutian group of islands, and thence to Puget sound. But when one hundred miles from King Kassen bay, on the Japan coast, the lead sank down as if into a crater at the bottom of the ocean, the wire running out 3,494 fathoms, or about five miles, and when only about 150 fathoms remained on the reel the wire broke near the surface. The breakage was caused not only by the great weight, but by a strong current which, at a depth of 200 fathoms, struck the wire and swept it under the ship.

The *Tuscarora* then returned to the coast of Japan, and commenced another great circle in latitude forty degrees north On this line was found but a slight current, with a still greater depth of water, or 4,655 fathoms. This was nearly twice the depth of the Atlantic where the cable between Ireland and Newfoundland was laid, and the depth below the surface was found to be greater than the height of the highest mountains above the surface.

The discovery of the submerged river or current 1,200 feet below the surface of the sea was explanatory of the movement of the ice of the Arctic ocean, which is carried by it southward on the eastern side of the continent, but which never appears in the Pacific. The Pacific submarine telegraph was not, however, advanced by the discoveries made. A few years later, in 1879, the German newspapers, under

the influence of the Zulu war, took up the subject of extending telegraphic communication more completely around the world, and to all parts of it, their principal subject of discussion being the cable proposed between San Francisco, Japan, and China; but that also has been forgotten in the rush of other more immediately pressing enterprises on the continent of North America.

In 1872 San Francisco exchanged congratulations with Melbourne on the completion of the telegraph by way of India and the Red sea, which gave California connection across the Atlantic and the American continent, at an average rate of three dollars a word. To-day there is some prospect of a sub-Pacific telegraph between Victoria, the Hawaiian islands, the Indies, and Australia, dependent upon a subsidy from the British general government and the provinces, but the project is not yet well defined.

A purely Californian enterprise is the Pacific Postal Telegraph company's business, of which John W. Mackay is founder and president, and C. R. Hosmer general manager. The company owns a cable to Europe.

A number of important improvements upon the original methods of telegraphing have been invented which greatly multiply its uses. Among these are the Gold and Stock Telegraph instrument, used in transmitting the sales in stockboards; the American District telegraph, connecting private residences with a central telegraph station; and the speaking telephone. The Gold and Stock Telegraph company of California was organized April 28, 1878, with a capital of $600,000, George S. Ladd, president; James Gamble, vice-president; M. Greenwood, treasurer; Andrew White, secretary. The board of directors consisted of George S. Ladd, James Gamble, M. Greenwood, William Ashburner, and D. O. Mills. This company was the result of a combination between the Gold and Stock Telegraph company of New York

and the American District Telegraph company of San Francisco. When the American district telegraph system, which was invented in 1872 by E. A. Callahan, was introduced in San Francisco, only four signals were in use, but eight others were added by the ingenuity of George S. Ladd and Stephen D. Field. The district box is circular in shape, and around the edge of a dial are the words, "messenger," "coupé," "hack," "telegraph," "doctor," "coal," "transfer," "police," "fire," with two blank spaces for miscellaneous messages. Simply by turning a pointer to the right word, and pulling a lever at the side of the box, the signal is transmitted to the office, and a messenger immediately sent on the errand, or the order is given by telephone to the party wanted.

In like manner, when the telephone was introduced in 1877, it was made tenfold more valuable here by the invention of the Telephone exchange, which was devised by Mr Ladd. It supplies a separate wire from a central station to each subscriber, who has furnished him a receiving and transmitting telephone, a signal bell, and like conveniences. Each wire terminates at the exchange in a switch and annunciator, which operates precisely as a hotel annunciator. The operator responding to a call receives instruction to place the subscriber in communication with another subscriber, who is called by the operator, and the two then converse upon any subject with perfect privacy. Exchanges are in operation in a dozen or more of the most important towns on the coast, and are being rapidly multiplied. They may be connected by wires from place to place, until the whole state is in speaking connection. The San Francisco Exchange has ten offices, 700 miles of wire, and 3,500 telephones. It has 3,000 subscribers, and makes on an average 3,000 connections daily. The charge to subscribers averages eight dollars per month.

The importance of telegraphy to the commerce of the world was well stated in 1871 by Samuel B.

Ruggles from the committee on telegraphic affairs of the New York chamber of commerce. Said Mr Ruggles: "Under the widespread solidarity of commerce now recognized, any commercial facilities secured for a part become facilities for the whole. With this view the committee have deemed it useful to collect and present, in tabular form, the amount of foreign commerce of the various civilized nations, and especially of their commerce on the Pacific and the Indian oceans. The result in round numbers is a total foreign commerce exceeding $8,000,000,000, of which Great Britain, France, and the United States have more than five-eighths." If it was that in 1871, what is it in 1891, and how much has the telegraph contributed to the increase?

UNIV. OF
CALIFORNIA

Geo Vanderbilt

CHAPTER V.

ROUTES AND TRANSPORTATION—OCEAN TRAFFIC.

EARLY VESSELS IN PACIFIC WATERS—INFLOCKING SHIPS OF THE GOLD-DIGGERS—SHIP-BUILDING—WRECKS AND DISASTERS—OCEAN STEAM LINES—NEW YORK AND SAN FRANCISCO VIA PANAMÁ—THE TEHUANTEPEC ROUTE—THROUGH MEXICO VIA VERA CRUZ AND ACAPULCO—THE NICARAGUA ROUTE—HISTORY OF THE PACIFIC MAIL STEAMSHIP COMPANY.

THE presence of American sailing vessels in Pacific waters began with the efforts of a company of Boston merchants who about 1787 attempted to establish a trade with China, and whose names were J. Barrell, S. Brown, C. Bulfinch, J. Darby, C. Hatch, and J. M. Pintard. Their two vessels were the ship *Columbia Rediviva* of 220 tons, and the sloop *Lady Washington* of 90 tons, commanded respectively by John Kendrick and Robert Gray.

Nothing surprises us more in these days of two thousand ton ships than to read of vessels of the size of these ocean wanderers being sent to circumnavigate the globe, which the *Columbia* did, arriving at Boston in 1790, having carried the flag of the United States around the world for the first time. This was under the command of Captain Gray, Kendrick being left with the *Washington* on the Northwest Coast. Events in which the governments of England, Spain, and the United States took part caused these seas to be deserted for some time, or until the Spanish missions in California again tempted New England ship owners to open a trade on the coast, which was never again interrupted.

Just previous to 1849 the presence of the United

States forces in California in 1847–8 had given an impetus to the coasting trade, which the mining rush developed into a furore. In August 1848 a vessel arriving from Mexico with a cargo was signalled from the hills, and eagerly boarded by rival traders the moment she came to anchor. The imports for 1848, chiefly in the last half of the year, amounted to $100,000, and for the six months ending in April 1849, to $1,000,000, which kept on increasing in the same ratio for two years thereafter. A list of the sailing vessels visiting San Francisco bay in 1846–8 is given in the fifth volume of my *History of California*, with their masters' names where known. The number is 157.

To have beheld the harbor of San Francisco in 1849–50 it would have been difficult to believe that there could ever have been absence of the means of transportation, where four years previous the lack had been as remarkable as was now the over abundance, useless while seamen were digging gold in the mines, and nobody to sail the ships whose canvass was rotting on the yardarms. No vessel could safely cast anchor without having first made prisoners of its crew. Another reason for the idleness of shipping was the arrival of a customs officer in 1849, who refused to issue licenses to vessels not built in the United States, and there were a good many such in the harbor. The commander-in-chief of the naval forces begged him to relax the stringency of his rules, and thereby reduce the cost of miners' supplies; but he was inflexible, preferring that his countrymen should pay six or seven dollars freight on a barrel of flour to Sutter's fort, rather than violate the laws of his country made with no reference to the existing condition of things. Many vessels deserted by crews and owners never went to sea again, but were used for lodging or store houses, and for prisons, or were broken up for the lumber they contained.

Could those vessels have spoken what tales they

would have unfolded! To what histories were they the introduction! Of the many they brought to California, how few realized their dreams of a grand future; how many laid down their lives; how many dragged out weary years in the hope deferred which maketh the heart sick, who are living yet to remark upon the inferiority of the present times compared with '49! And so much better is it to have tried and failed than not to have tried at all that few could be found to regret these seemingly wasted years. Each has done what he could, and be it much or little it has gone toward that marvellous empire-building on these shores such as the world has never before seen, nor ever will again witness.

The number of vessels arriving in 1850 was 592 American and 58 foreign. The majority were sea rovers, but some were soon formed into lines to different ports. The list of sailing vessels which arrived at San Francisco from Atlantic ports from May 1851 to March 1857, with the clipper fleet, numbered 641, and the arrivals 918. The schooner *Sierra Nevada* sailed from China to San Francisco, 6,000 miles, in thirty-four days in the latter part of 1850. In 1852 the first regular packet line to China, the Oriental, was established by Ogden and Haynes. There was, previous to this time, no better way of insuring the delivery of a letter in China than to send it in a wooden box as freight, taking out a bill of lading; but the owners of the Oriental line sent out a mail-bag with each of their vessels, the *Pathfinder* being the first mail-carrier on this route.

The number of sailing vessels advertised to run to different parts of the Pacific in 1851 was large, partly because owners desired commissions for their vessels, and partly because there existed some actual requirement for communication. Ships coming out from New York found here nothing to carry back except passengers, who preferred the quicker steamer routes.

There was, however, great demand for vessels coming this way.

In 1851 clipper ships, a development from the American schooners known as Baltimore clippers, famous for their sailing qualities, came into use, having first been called into existence by the increasing East Indian trade, which demanded speed and regularity rather than stowage room, but still more by the immense passenger traffic to California, and by the needs of the Pacific Mail Steamship company. These ships were the admiration of the world for their grace and fleetness on the ocean. With their beautiful lines, clear, sharp prows, lofty spars, great spread of sail, and artistic tracery of rigging, they were justly admired. In this class of vessels the voyage around Cape Horn was reduced from seven or eight to three or four months, and such was the promptness of their arrival that it could be calculated with almost the certainty of a steamer. Between their advent and May 1852 seventy-four clipper-built vessels arrived in the port of San Francisco. An average passage was 125 days, but the *Sea Witch*, which arrived in 1850 in 97 days from New York, inaugurated shorter passages. The *Flying Cloud* arrived from New York in August 1851, in 89 days; the *Sword Fish* arrived in February 1852, in 90 days; while the *Surprise*, *Sea Witch*, and *Flying Fish*—the latter from Boston—made the voyage in 90, 97, 98 days respectively. The queen of the seas was the *Ino*, which beat the *Flying Cloud* two days in 1852. She was a full-rigged clipper ship, rated A1. Day after day her log showed 240 miles, and at times she registered seventeen miles an hour. During the civil war the *Ino* was changed to a bark, and otherwise remodelled for use by the government, and had her name changed to the *Shooting Star*. In 1873 she was carrying coal to the ports where the Pacific Mail had coaling stations. Other famous clippers in the early days were the *White Squall*, *Typhoon*, *Trade Wind*, and *Sovereign of the Seas*.

Others were named the *David Brown, John Gilpin, Contest, Oriental, Romance of the Sea, Witchcraft, Hurricane, Climax, Wings of the Morning, Lantas, Antelope, Aramingo, Radiant, Rongua, Archer, Seaman's Bride, Ocean Spray, Competitor, Storm King,* and many poetical designations. The clipper ship *San Francisco,* valued at $500,000, was lost in February 1854. Thus the need of rapid transit to California forced the construction of numerous vessels of a superior class, which became invaluable to commerce, performing the longest voyages known to the mercantile world, and revolutionizing the shipping models of every commercial country on the globe.

The arrivals in the port of San Francisco from the 21st to the 29th of July 1853, of vessels of all classes and from various sea routes, was 166. On the 30th there was 99 vessels in port, 30 of which were American ships and barks, 23 English and the remainder French, Chilean, Peruvian, Dutch, Sardinian, Danish, Hawaiian, and Mexican.

The arrival of vessels was telegraphed to the Merchants' Exchange by means of a semi-sphere on the eminence which took the name of Telegraph hill, which communicated with a similar station at Fort Point and Point Lobos. When a steamer from Panamá or San Juan del Sur was discovered a large black ball was hoisted on Telegraph hill.

In 1853 Joseph H. Scruttan established a line of packets to Sydney and Port Phillip, and Hughes and Parker another; nor was it long after the first delirium of gold-hunting was over when lines of sailing vessels were running with regularity to New York, Boston, Portland, Victoria, Humboldt bay, San Diego, and intermediate ports, and ports on the Mexican coast. In May 1853 there were 239 vessels on the sea with cargoes for California. The subjoined table shows to what the trade outward had grown in 1855.

TO WHAT COUNTRY.	NUMBER OF VESSELS.	VALUE OF CARGOES.
China	38	$668,600
Australia	34	933,215
Hawaiian Islands	31	480,340
Tahiti	15	75,880
Valparaiso	26	79,364
Callao	17	362,189
Mexico	26	616,559
New York	11	833,062
Lower California	6	22,919
East Indies	8	58,192
Vancouver, B. C	6	42,376
Russian Possessions	5	62,932
Liverpool	3	317,537
Pacific Ports	14	92,796
	240	$4,645,951

The freight paid on imports carried by 71 vessels from New York was $1,749,087; on 40 from Boston, $960,906; on 9 from other eastern ports, $191,044; on 112 from foreign ports, $955,402, amounting to $3,856,439 for the year.

Ship-building was carried on to a limited extent in San Francisco at a very early period, and in 1850 extensive works for constructing and repairing vessels of all kinds were in existence in the then suburb of Happy valley, a region fronting the bay south of Market street, and still devoted to these crafts which go to build up an ocean marine. H. B. Tichenor & Co. had a dry dock at the foot of Second street between Rincon and Mission points, for convenience in repairing, charging sixty cents a ton for the first day, and less per day if the work was protracted.

There was profit in patching up vessels which were already afloat, but the worse for their conflicts with wind and weather; and this business, alternated with entirely original work; but as might be expected at this early date, commerce was chiefly carried on in Atlantic built vessels, American ships outnumbering all others on the lines to China, Australia, Central America, the islands of the Pacific, and Mexico. The

following table of vessels arriving in 1862 gives a comparative view of the shipping employed on the Pacific at that period:

NUMBER OF VESSELS.	WHERE FROM.	TONNAGE.	FREIGHT EARNED.
19	Australia	10,357	$ 83,649
3	Brazil	772	16,000
48	Central America	77,205	1,083,644
42	China	36,772	427,841
7	Chile	2,682	39,069
8	East India	4,583	91,576
24	England	18,735	330,878
21	France	10,485	221,067
7	Germany	2,839	60,635
1	Italy	563	6,946
5	Japan	1,342	12,000
55	Mexico	15,339	70,338
2	New Zealand	702	4,532
10	Peru	1,999	44,949
20	Sandwich Islands	7,046	34,478
12	Society Islands	1,950	20,000
1	Spain	321	6,500
75	Vancouver I., B. C.	60,717	53,905
13	Russian Asia & N.W. C.	5,410	42,540
30	Boston	28,789	597,776
73	New York	84,465	1,668,937
4	New Bedford	1,278	23,800
1	Newport	239	3,000
2	Philadelphia	2,037	38,872
9	Whalers	2,936	.....
1,455	Domestic Pac. Ports	261,893	.....
Totals..1,947		641,456	$4,982,932

This statement as compared with that of 1861 shows an increased freight of $75,000 with 65 vessels less, but as compared with 1860 a gain of 76 vessels.

Among the early shipping lines running out from San Francisco were the Merchant's line to Victoria, which owned the clipper brig *Angenette*, Lamb master, and the clipper barkentine *W. B. Scranton*, Cathcart master; the California and Oregon packet lines to Portland, which owned the *Jane A. Falkinburg*, a clipper barkentine, M. C. Erskine master; the Merchant's Express line of clipper ships between New York and San Francisco, office 88 Wall street, R. M. Cooley agent, and Dewitt, Kittle & Co. agents in San Francisco; Coleman's California line to New York, established in 1662; Glidden and Williams' line

between Boston and San Francisco; and Southern Despatch line, which gave the means of communication to the coast towns of California.

As steamships multiplied sailers were forced to seek a different class of freights. For instance in 1867 there were 92 vessels which cleared for Europe with wheat, whose cargoes were valued at $4,940,403. This fact illustrated the change in California from gold-mining to agriculture. The total number of vessels arriving in 1867 was 2,677, the total tonnage being 909,025; the total departures 733, with a tonnage of 592,645, showing how much this state still depended upon the Atlantic states for manufactured goods. In 1870, 3,558 vessels arrived with tonnage of 1,062,199, and there departed 763, carrying 573,582 tons of merchandise. The freights paid on cargoes from New York in 1870 amounted to $1,023,075; from Boston, $238,927; from other Atlantic ports, $96,415; from foreign ports, $2,127,246; total, $3,485,663. This was a decrease in ocean freights since the previous year of $2,962,534, and was attributable to the opening of the transcontinental railroad, and the direct bid made for freights by the Pacific Mail Steamship company, which was compelled to compete with where it before would have encouraged sailing vessels, as I show in the history of the great corporation. For three or four years there was slight variation from the figures of 1870, but in 1874 there were 4,204 vessels arriving, of an aggregate tonnage of 1,553,514, and also a gradual increase thereafter in both imports and exports. The freight on cargoes by sea in 1876 was $5,207,725. The valuation by assessment on the personal property roll for 1877 placed the sailing vessels paying taxes in San Francisco at $1,265,000, as against steam vessels valued at $7,092,000.

In 1879 the freight paid on cargoes by sailing vessels had fallen off to $2,461,266, which had increased slightly in 1880. In 1887 the carrying trade of the

Pacific entered at San Francisco was divided in this way: American sailing vessels, 249; steamships, 168; aggregate tonnage, 539,102. Foreign sailing vessels, 276; steamships, 69; aggregate tonnage, 480,197; giving us 59,005 tons more than all the others nations. But the fact remained that more foreign than American sailing vessels entered this year, showing that to steamship lines we owed the supremacy achieved or maintained. San Francisco was the only port in the United States which could exhibit an American supremacy of the carrying trade over all foreign nations. The ability to do so was owing, however, to the fact that foreign steamers could not carry American goods over the Isthmus via Panamá; that the American steamship companies, Pacific Mail, Occidental and Oriental, and Oceanic had secured a firm hold on the trade of China, Japan and Australia, which subsidies enabled them to keep. It remains to be seen whether, with the present policy of the United States, even the steam lines will be able to retain their advantage when a ship canal shall have been completed from ocean to ocean.

In 1846 there were 407,096 tons of American shipping entering New York, and one-third as much of foreign; and this prestige we retained until about 1866. It appears from the treasury report that in 1855 a greater number of large vessels and schooners were constructed in the United States than in any previous year, their number being 901. That this should be so was not remarkable, considering the large and remunerative commerce which had sprung into existence with the settlement of California; but that this year should have remained the date of maximum ship-building requires some explanation, the falling off in 1868 being 383, although this was a period of active commercial relations with every part of the globe. Steamship lines relieved the Cape Horn fleet to some extent even in the fifties. But besides the steamers, there were also other vessels, forty-

seven clipper ships, some of which made almost two passages out in a year, seventeen of which were owned wholly or in part in San Francisco and Sacramento. During the civil war the sailing fleet on both oceans was seriously crippled, owing to the ravages inflicted on the merchant marine by confederate cruisers. Hundreds of American vessels then changed flags, adopting for safety those of other nationalities, and many were laid up to wait for peace.

The vast expenditure incurred by the government to crush the rebellion, leaving the nation deeply in debt, was the occasion of the imposition of heavy tariffs on many of the articles which enter into ship-building, greatly increasing its cost. Sailing vessels were displaced by steamers, built more cheaply in France or Great Britain than they could be in the United States, and subsidized by their respective governments. On the Atlantic there were but 30 American steamers, exclusive of the Panamá line, opposed to 106 of foreign construction. But on the North Pacific there were 30 American steamers and no foreign ones, although on the other side of the equator there was a subsidized British line.

The decrease of American ship-building on the Atlantic coast was a spur to the development of the resources of the Pacific coast, where ships could be built better and cheaper than in Maine. During 1868 7,604 tons of shipping were turned out in California in steamers, barkentines, schooners, sloops, barges, and a brig—57 vessels. In 1869 11,625 tons of shipping were constructed, being mostly river and bay steamers, schooners, and barges, with two barks, one of which, the *Webfoot*, was built at Coos bay, as well as three schooners and one steamer. In fact, Coos bay, Puget sound, and the Columbia river turned out annually vessels of fine models and excellent materials.

I show elsewhere how and why the Pacific Mail Steamship company and the transcontinental roads

combined to destroy the clipper traffic between New York and San Francisco. This, however, was not enough, even with the results of the war, to account for the marked decline of our shipping interests, there being two foreign to one American vessel entering New York in 1870, and the shipyards of that city being closed.

Two principal causes operated to bring about the change in our commerce: one the substitution by the English of iron for wood in ship-building, and a change in our navigation laws. In the first years of the existence of our government there was a difference in the duty on imported goods of ten per cent in favor of importations made in vessels built in the United States, and restrictive laws prevented foreigners from bringing any goods not produced in the country where the vessels were owned. Under these regulations our merchant marine increased rapidly. But the war of 1812 resulting, this government by treaty agreed to admit British goods in British vessels under the same import duties as our own, but did not remove the restriction with regard to foreign vessels loaded with goods not the production of their own country. Still, although we had lost a revenue which was rapidly enriching us, we retained two-thirds of the carrying trade between the two countries until 1850, when the restrictive clauses were swept away, and the English, with their ships that cost less, paid for in cheaper money, and manned by cheaper sailors, were placed on an equality with our higher-priced and dearly manned vessels. The difference it made was at once apparent. In 1849 the per cent of our foreign trade carried in American bottoms was 75; ten years afterward it was only 33 per cent, and in 1888 it was but 14 per cent.

These results were foreseen by merchants and shipowners many years ago. In February 1870 a meeting was held in San Francisco to form an association for the restoration of American shipping. They

deprecated the condition of transatlantic trade, and declared the Pacific to be "yet mainly ours, and we may make it an American possession." It was not claimed that our interior or coastwise marines had suffered; on the contrary they had prospered, and the loss was altogether in our foreign trade. Our navy was dwindling, and soon we should be complaining of overproduction, having shut ourselves out of the markets of the world. To reinstate American shipping a vigorous governmental policy must be entered upon, and congress must lessen the surplus in the treasury by subsidizing some merchant lines. Such is still the voice of the shipping and industrial league both east and west.

An attempt was made in 1876–7 to pass a bounty bill, providing that every American vessel, sail or steam, trading with foreign ports, should be allowed thirty cents per ton for each 1,000 miles sailed or steamed for a period of twenty years, one-third reduction of this rate to be made at the end of the first ten years. It was claimed that postal communication with all parts of the world should be by a compensated mail service in our own ships under our own flag; and that reasonable port charges were necessary to the shipping interest.

Why congress has obstinately refused to give protection to the marine, the only thing that England protects, it would be difficult to explain. If our trade is only to be recovered by twenty-years' bounties to all American vessels in a foreign trade, which seems reasonable since we have forty years of losses to make up, it will be paying lavishly for a lesson in political economy.

Meanwhile the shipping and industrial interests in California, and the coast generally, have not languished; in 1878 160 vessels were assessed as personal property in San Francisco. So far as wooden ships are concerned, they have always been in the process of building. But the most recent innovation

and triumph of industry has been the construction of a United States steel cruiser at the Union Iron Works, under a contract between the government and Prescott, Scott & Co. This is the first attempt to do this kind of ship-building on the Pacific coast, and was a signal success, the praise of which belongs to Mr Scott.

Disasters occur to a large percentage of sailing vessels, both small and great, which are classified under the heads of founderings, strandings, collisions, burnings, and other causes, which latter term must include lightnings and tempests, and the many ways in which the elements war against the undertakings of men.

The first wreck on the coast of California was that of the United States steamer *Edith*, which carried delegates to the state convention at Monterey; and I think the second was the United States brig *Laurence*, Captain D. B. Ottinger, four miles from Point Lobos, in November 1851.

Of the hundreds of vessels of every class which visited the Pacific coast in the fifties there was the usual decimation by disaster. In November 1858 the ship *Lucas* was stranded on the Farallones, with a loss of fifteen lives. In March 1859 the brig *Ellen H. Wood* was wrecked at Salt Point, and four lives lost. The total losses this year were eighteen, among which were the following American ships: *Fanny Perley*, of 1,123 tons, which was never heard from; *Fleetwood*, of 663 tons, which was lost with 18 lives; *Helen A. Miller*, of 510 tons; *Manitou*, of 1,041 tons, lost with all on board; *Mastiff*, of 1,031 tons, burned at sea, but crew saved; *Medford*, of 600 tons; *Northern Eagle*, of 654 tons, burned in Esquimault harbor; and *Queen of the Pacific*, which struck a rock off Pernambuco.

In the following year there were 23 disasters on the Pacific, 8 of which were total losses, among which were the *Friendship*, *John S. Cabot*, and *John Marshall*,

which carried their crews to the bottom. In November 1866 the British bark *Caya* went on the rocks at New Year point, 20 miles north of Santa Cruz, when 26 lives were lost. In 1868 there were 37 disasters, 13 of which were total losses, among which the *Hellespont* carried down four men, and the *Ellen Sears* was never heard from.

The year 1876 was an unusually disastrous one, accidents happening to 78 ships, 87 barks, 3 brigs, 35 schooners, 6 sloops, and 5 barges, besides 29 steamers injured, and 6 of which were lost. The losses to the sailing fleet were 10 ships, 6 barks, 3 brigs, and 12 whalers abandoned in the Arctic sea. The loss of life was also great, the *Harvest Queen*, with wheat for Liverpool, wrecked in the Irish channel, losing all her crew; also the *Victory, Theseus, Uncle Sam, William Sutton, Kodiak;* while the *Albert and Edward* lost 4, the *Silver Cloud* 3, and the *Perpetua* 3, in all at least 100 men, to which number should be added 50 men left with the abandoned whalers.

In the following two years there were 167 disasters, with a total loss of 45 vessels and 28 lives. It has been estimated that over $4,000,000 of capital was sunk in the sea, in the shape of sailing vessels to and from this port, between 1861 and 1878, and 400 or 500 persons have perished with it. The average for the years quoted is nearly twenty each, and probably remains about the same. There have been several notable disasters in the vicinity of San Francisco. The American ship *Franconia*, William Otis commander, out from New York, and registering 1,461 tons, carrying 2,896 tons of freight, was lost on the Farallones June 25, 1881. Her cargo consisted of railroad iron, agricultural implements, hardware, and liquors. No lives were lost. The ship *Alice Buck*, Captain Henningsen, bound to Oregon with railroad iron for the Oregon Railroad and Navigation company, struck on the rocks near Spanishtown in Half Moon bay on the 26th of September 1881, and became a

total wreck, with a loss of 11 men. She was of 1,425 tons, built in Maine, was 11 years old, and had been leaking badly for some time, from treatment received in a hurricane, so that it was the captain's intention to beach her, although the going on the rocks was accidental. All the crew would have perished but for the assistance rendered by the steamer *Salinas*, which lay at Amesport, near by. The British ship *Montagnais*, from Hull, with a cargo of coal for Wilmington, California, was burned October 2, 1881, when about 100 miles out. The crew of 21 men were rescued by the British bark *Avona*, Captain Martin, from Auckland. The *Avona* also had on board part of the crew of the ship *Acadia*, wrecked on Dueie island. The captain and crew were nine days in the boats before reaching Pitcairn island, where they were found, and where 11 men were left. The loss was attributed to an incorrect chronometer. In June 1882 the American bark *Roswell Sprague*, of 925 tons, was discovered to be on fire when twelve miles west of Point Lobos, and ran back to port, being towed in by the incoming steamer *Los Angeles* in time to save her crew. About the same time the ship *Great Western* was burned while lying at the old railroad wharf, Oakland, which was damaged to the amount of $50,000, the whole loss being $100,000. The ship had been a packet, plying between Liverpool and American ports, and had a romantic history for twenty-eight years. The *Erin Star* went ashore on Bodega point not far from this time, and was a total loss.

The British iron ship *Lammermoor*, one of the finest vessels afloat, of 1,626 tons register, Captain J. D. Guthrie, from Sydney, went ashore on the same rocks in June 1882, and became a total wreck. She was loaded with coal, and carried a crew of 28 men, who were picked up by a schooner. The vessel was valued at $60,000, and the cargo at $16,800, consigned to Williams, Dimond & Co. of San Francisco. In Octo-

ber following the British ship *Bremen*, Captain Dougall, ran on the Farallone islands in a fog, and was lost, the crew being rescued by the *Daisy Rowe*. The *Bremen*, registered 2,700 tons, was loaded with coal, and was the sister ship of the *New York*, both of which were built in Philadelphia for the Bremen trade, and were regarded as models. In 1887 there were 150 disasters to sailing vessels reported at San Francisco with forty total losses valued at over $1,000,000, and the loss of between 80 and 100 lives. In 1888 the British ship *Abercorn* was lost at the mouth of the Columbia and 24 of the crew perished.

It was long recognized that there was needed a harbor of refuge on the coast between San Francisco and the Columbia, and the matter was kept before congress for a number of years. The points most in favor were Cape Foulweather, Yaquina bay, and Port Orford, the latter being recommended by marine men as the most western point of land on this extent of coast, and most free from fogs. Senator J. H. Mitchell of Oregon labored industriously for this measure, which will require the expenditure of several millions at either place. But if, as seems to be the fact, most of the losses come from running on shore and immediately breaking up, the proposed shelter will avail little, although, as a refuge from the fury of wind and sea, it might prove to be of great importance, and it is evidently due to sailors to provide this means of preservation from their perils.

Every one knows that there are no firmer believers in luck than seamen. Haunted ships, lucky and unlucky ships, and various superstitions are credited fully by the majority of sailors, and by many shipowners. The Cunard company chose to make light of the prejudice against Friday by selecting that day for the sailing of the first steamer of their line, July 4, 1840, and no steamship line ever was more uniformly fortunate.

Against the letter S the seamen of the United

States navy entertained a dislike as being likely to involve a vessel whose name commenced with that capital in misfortune; and they instanced the *San Jacinto*, *Saranac*, *Saginaw*, *Scioto*, *Sacramento*, and *Suawanee*, which were lost; the *Shepherd Knapp* and *Senator*, wrecked; the *Southfield* sunk by the *Albemarle;* the *Signal*, *Sachem*, and *Satellite* captured; the *Sydney C. Jones*, burned; the *Switzerland* sunk at Vicksburg; the *Shenandoah* being a notable exception. The fondness of the American ear for the sibilant sound of a letter which was chosen more often than any other, and per consequence appeared more frequently among the lost, might account for the numerous examples given. No more lucky steamer was ever on the Pacific coast than the *Senator*, and the British ship *Senator* in 1858 made a remarkable trip to San Francisco; but the *Sacramentos* were certainly unlucky. The *Orizaba* was quoted as a lucky steamer, and had always a Johnson for captain until she was taken off and laid aside, and the *California* and *Idaho* were equally fortunate.

Among clipper ships the *Young America* was noted for speed and luck; but when she left the wheat carrying trade and essayed to be a collier on the northern coast, the charm was broken, and she foundered off Cape Flattery in 1886. Another ward of the blind goddess is the American ship *A. G. Ropes*, running between New York and San Francisco, but undoubtedly a good deal of her good-fortune is due to her commander.

An iron ship launched in England as the *Ada Iredale* had an eventful history. She took fire in mid-ocean, being loaded with coal, and was abandoned by her officers and crew, who expected nothing else than that she would blow up and go to the bottom. This she did not do, however, but her coals burned steadily away for months, the ship being frequently seen by passing vessels in this condition, and, finally, she drifted among the Society islands where she was

tossed into port and the fire extinguished. Being temporarily fitted up she was sent to San Francisco and there thoroughly repaired and refitted, and was admitted into the American marine under the name of *Annie Johnson*, since which change of flag and appellation her good-fortune has not deserted her.

California ship-builders avoid the names with the adjective Golden in them as unlucky, as well as the name San Francisco, which, also, besides commemorating a frightful calamity, begins with the forbidden S. As an argument against seamen's superstitions may be quoted the following brief account of the losses of steamer lines on the Atlantic, from the *Sirius*, the first steamship to cross that ocean, down to 1858, during which eighteen years there were thirteen total losses, only one of which began with an S, and only three with any one letter: *President*, never heard of; *Columbia*, all hands saved; *Humboldt*, all saved; *City of Glasgow*, never heard of; *Philadelphia*, all saved; *Franklin*, all saved; *Arctic*, a few saved; *Pacific*, never heard of; *Lyonnais*, a few saved; *Tempest*, never heard of; *San Francisco*, 200 lives lost; *Central America*, 419 lives lost; *Austria*, burned, and 500 lives lost.

The bare statement of a great commerce springing up like a fungus in a night, in a country so remote from centres of trade and so without known resources, naturally impels us to seek not for its causes only, which in the case of California was primarily the discovery of gold, but also for the means which made possible the seeming marvel—not to say miracle—for the coincidence which brought about so sudden a development of California from its ante-conquest condition to that of 1849, when it became an organized American state, are undeniably remarkable enough to remind us of our national belief in a manifest destiny.

The war with Mexico and the treaty of Guadalupe Hidalgo gave us the sovereignty of a vast extent of

territory, which otherwise small garrisons of soldiers would have occupied, much after the fashion of their California predecessors, and with as little benefit to the world, until by slow degrees a western and southern immigration would have settled it, bringing with them the ideas and institutions of the southwestern border states. Even the discovery of gold, world-witching although it was, could not have done more than bring together from various parts of the world, and from our own eastern territory, a mass of people by the slow methods of wagon and sailing vessel; and in the same slow manner would have been brought together the materials for a civilized existence.

But a greater than a conquering hero had been brought upon the stage of human affairs at the right moment to be of use at this juncture, and that greater was a force which was to revolutionize, in a manner that war could not, the business of the globe, and its name was Steam.

Steam as an agent in ocean navigation was still comparatively new in 1848, although as early as 1819 an American steam and sail vessel was constructed in Savannah, Georgia, which made a voyage to Russia via England, returning from St Petersburg to New York in twenty-six days, after which period there was a steady improvement in steam navigation, which was applied chiefly to alongshore, lake, and river vessels and boats. The first steamships turned out from New York yards were the *Lion* and the *Eagle*, built by Jacob Bell for the Spanish government in 1840. In 1841 William H. Brown built the *Kamschatka*, which was sold to the Russian government; and the United States navy received its first steam vessels, the *Mississippi* and *Missouri*, "unequalled by the like productions of any country" at that time. The *Missouri* was lost, but the *Mississippi* was still pronounced in 1850 to be the most economical and efficient steamer afloat in any waters, and not surpassed in speed and

other desirable qualities by more recently constructed naval steamers, either at home or abroad.

The first ocean steam mail line between the United States and any other country was that belonging to Samuel Cunard, established in 1840, to run between Liverpool and Boston, and subsidized by the English government to the amount of £85,000 per annum. This line was somewhat later extended to New York, and received an annual payment of £145,000 for carrying the mails, forty-four voyages to be made annually, the line to consist of nine steamers of 400 horse-power, with one spare steamer of 150 horse-power.

Great Britain had at this period lines of steam vessels carrying mails over fifteen different routes. Besides coast and European lines, there were those that extended not only to the United States and Canada, but to the West Indies, gulf of Mexico, Sydney and New South Wales, East Indies and China, and the Pacific. England had in 1847 over one hundred steam vessels suitable for war purposes, as naval battles were then fought, the aggregate horse-power of which did not exceed 32,327, or an average of 312 tons. The Cunard and West India lines of mail steamers numbered twenty, which, said a senatorial committeeman appointed to report, could "have been employed in burning down our cities and ravaging our sea-coast," finding nothing opposed to them.

In view of this disproportion of naval power, the United States congress in 1845 authorized the construction of two steamers, to carry the mails from New York to Bremen, via Southampton and Cowes, and back, offering a subsidy of $400,000 annually. The first vessel constructed for this service, in what was known as the Ocean Steam company's line, was the *Washington*, of 1,750 tons burden, with accommodations for 250 passengers. She was built by Westervelt and Mackay of New York, completed in the spring of 1847, and started on her first voyage in June. She had

sufficient power for speed, but was cranky in management, being too high out of water and too deep under water for her width, and was considered a failure, with her consort, the *Hermann*, although they continued to perform the service for which they were intended. Later vessels of the Ocean Steam company were built to avoid their defects.

The rapid application of steam to transportation in the United States is best illustrated by the fact that in 1846 there were 108 steamboats built on the Ohio river alone, and that on the Ohio and Mississippi rivers 750 were employed at this time. The average capacity was about 500 tons, and the value of the fleet $12,000,000.

On the 3d of March 1847 congress authorized the construction of four war-steamers, and allowed the secretary of the navy to contract for the building of five others, which could be converted into vessels of war, but which were to be employed in carrying the United States mails from New York to New Orleans, touching at Charleston, Savannah, and Habana, from whence they were to proceed to Chagres with the mail for Oregon, California at this time not having made a demand for mail facilities. On the Pacific side the mails were to be transported in three steamships of not less than 1,000 tons burden each.

Further, a proposal which had been made in 1846 by Edward K. Collins, James Brown, and Stewart Brown of New York, to carry the mail between New York and Liverpool twice a month during eight months of the year, and once a month during the remainder of the year, was accepted by the secretary of the navy. The Collins company agreed to construct five steamships of not less than 2,000 tons measurement and of 1,000 horse-power, built for speed, and strong enough for war, which, when not employed in the mail service, should be subject to the orders of the government for carrying despatches, at a fair compensation, if required, or to be sold to the United States

at a proper valuation if desired. The sum which the government agreed to pay for the mail service was $385,000 per annum, in quarterly instalments. The *Atlantic*, the first of this line completed, sailed on her first voyage in June 1850, followed quickly by the *Pacific*, the *Baltic*, and the *Arctic*, each of them nearer 3,000 than 2,000 tons, and having not less than 1,500 horse-power. It will be seen from this that the United States was making rapid strides in steam naval architecture between 1847 and 1850.

The contract for steamers to perform the mail service between New York and New Orleans semi-monthly, via Charleston, Savannah, and Habana, and thence to Chagres on the isthmus of Panamá, and back in the same time, was taken in April 1847 by Albert G. Slad of Cincinnati, and by him in August 1847 transferred to George Law, M. O. Roberts, and Bowes R. McIlvaine of New York. The agreement called for four vessels of not less than 1,500 tons burden, and engine of not less than 1,000 horse-power, and one of not less than 600 tons, with engines in proportion, two vessels to be ready by the first day of October 1848, and two more by October 1849, with no stated time for the fifth. Such was the overpress of work in this industry in these years, that the time of completion had to be extended for want of material, and the United States Mail Steamship company was forced to purchase the *Falcon* of 1,000 tons to commence the performance of its contract for which it was to receive $290,000 per annum. The vessels of this line which were completed before 1850 were the *Ohio* of 2,432 tons, and the *Georgia* of 2,727 tons, both of superior speed and excellence.

The contract for carrying the Oregon mail was let in November 1847 to Arnold Harris of Arkansas, who transferred it to William H. Aspinwall of New York, but with some alterations. The original agreement set forth that for the sum of $199,000 per annum Harris should perform a monthly service from

Panamá to Astoria and return once a month, for ten years, and should furnish three steamers, two of which should be not less than 1,000 tons, so constructed as to be easily convertible into war-steamers. The secretary of the navy made advances to Aspinwall to enable him to complete the contract, with the consent of congress, taking security on the vessels, and also required him to stop and deliver mails at San Diego, Monterey, and San Francisco, this alteration in the contract being made early in August 1848. Under the new agreement three vessels were constructed, namely, the *California*, *Oregon*, and *Panamá*, and the company owning them, styled the Pacific Mail Steamship company, consisted of Gardiner, Howland, Henry Chauncey, and William H. Aspinwall. The *California* left New York October 6, 1848, the other two following at intervals of one month.

In 1850, three years after the completion of the first ocean mail steamers in the United States, four important lines had been established, with about twenty strong steamers, ranging from one to three thousand tons capacity. These vessels were fleet, and their effect upon American commerce was very soon felt. The West India Royal mail of England had been since 1846 carrying the mail from Chagres to Southampton in thirty-eight days; but in 1850 the United States Mail Steamship company carried it to New York, and thence it was conveyed by the Collins line to Liverpool in twenty-two days from Chagres, or fifteen days sooner than by the British line. The establishment of the American line to Chagres had also the effect, although only three ships were as yet employed in it—the *Illinois* having been added to the *Ohio* and *Georgia*—of expelling from our southern ports fourteen British steamers, commanded by naval officers, who had become as familiar as our own seamen with the coast of the United States. Their vessels not being able to compete with ours, their wharves and other shipping accommodations were dis-

posed of. The English government, however, revised and extended its West India line, and entered into a new contract with the Royal Mail Steam Packet company, a material feature of which was to run a main line direct from Southampton to St Thomas, and thence to Chagres and back, twice a month, with steamers of larger capacity and having a speed of twelve to fourteen miles an hour. Contracts were let in 1850 for several new steamships for this line, the old ones to be employed on branch routes, and the line extended to Rio de Janeiro on the Atlantic coast of South America, while the line to Valparaiso on the Pacific coast was increased to a semi-monthly service. These movements were the immediate results of American enterprise in steamship construction, which being at that time fostered by congress was in a fair way to deprive Great Britain of her proud title of mistress of the seas, when in 1858 it received a check by the withdrawal of government patronage, and the cessation of the trans-Atlantic mails in consequence. As a matter of some interest, as a collateral to my subject, I subjoin a table of the ship-building industry, at this period of a promising growth.

BUILDERS.	NUMBER OF VESSELS.	TONNAGE.	LAUNCHED.	ON THE STOCKS.
Westervelt & Mackay.....	13	15,738	13,038	2,700
William H. Webb.....	13	27,058	19,350	7,700
William H. Brown.....	9	8,540	7,190	1,350
Jacob Bell.....	6	8,531	5,180	3,350
Thomas Collyer.....	8	4,400	3,350	1,050
J. Simonson.....	3	1,565	1,565	.....
Smith & Dimon.....	3	4,300	2,100	2,200
George Collyer.....	1	100	100	.....
Hayden & Canada.....	1	250	.....	250
William Collyer.....	6	2,525	2,400	125
Lawrence & Sneeden.....	5	3,750	2,300	1,450
Perrine & Stack.....	8	9,460	4,071	5,389
Jabez Williams.....	3	1,581	1,581	.....
Cape & Allison.....	3	500	.....	500
Isaac C. Smith.....	2	1,112	.....	1,112
Nehemiah Knapp.....	2	240	.....	240
Collyer & Webb.....	1	100	.....	100
Total.....	87	89,471	62,225	27,516

To revert to and complete the history of the Pacific Mail Steamship company for this period, it is only necessary to state that the demands for passenger service which met the first and every ship of the line, rendered it impossible to continue the first contract, and although relief was afforded by sending the Oregon mails from San Francisco by sailing vessels for some time, in March 1851 a fresh contract was entered into by which that company agreed for $348,250 annual compensation, to furnish six instead of three vessels for the service, the latter three being the *Tennessee* of 1,300 tons, the *Golden Gate* of 2,000 tons, and the *Columbia* of 700 tons. The *Columbia* arrived out in the spring of 1851 and the *Golden Gate* half a year later. With these six steam vessels the foreign and domestic mails were to be transported from Panamá to San Diego, Monterey, San Francisco, Astoria, and, if possible, to Scottsburg on the Umpqua river. The latter part of the contract was found to be impracticable, the *Columbia* being nearly lost at the mouth of the stream, and in 1853 or 1854 the contractors were allowed to omit calling at the way ports in California upon a covenant to furnish coasting steamers for the mail service to those places.

As the reader remembers, the contract of 1847 was for a route from Panamá to Astoria, a dozen miles inside the bar of the Columbia river. In 1848 some noble geographer in the navy, or treasury, or mayhap the postoffice department, suggested leaving the Oregon mails at the mouth of the Klamath river, whence it could not by any means reach the Willamette settlements, even if any vessel could land them at that point. The postal agent at San Francisco managed to have conveyed, with such regularity as could be secured in the midst of the confusion of 1849–50, the Oregon mails to Oregon, on board of sailing vessels seeking lumber or provisions in those waters; and the postoffice department, endeavoring to right the wrongs of the Oregonians, in 1850 decreed that "the mail

service for the entire distance between Panamá and Nisqually, at the head of Puget sound, should be performed in sea-steamers as stipulated in the contract with Arnold Harris in November 1847, stopping, of course, at Astoria. This order was so far modified as to make Astoria, and not Nisqually, the northern terminus, but the steamers were required to touch at Trinidad bay on the northern coast of California, and such other intermediate points as should be determined upon. It speaks well for the seamanship of the early commanders that no more wrecks occurred, considering the nature of the coast and the ignorance of the departments. The small and staunch steamer *Columbia* solved the problem for the postal agent, and in 1851 began regularly to carry the mail to Portland instead of leaving it two or three hundred miles away from the populated parts of the territory. No limited time was agreed upon between the government and the Pacific Mail company for their voyages; but the time consumed varied from twenty-five to twenty-eight days after the Isthmus transit was reduced to one day; before that the length of a voyage could not be very closely determined.

The first steamer of the Pacific Mail company to reach Panamá was the *California*, which left New York before the gold discovery was made known there, with a small passenger list. It was met on this side by the news, and took on quite a number of passengers at South American ports. But at Panamá the demand for passage to California was appalling. Between one and two thousand persons were gathered there, who had been brought to Chagres by the United States Mail Steamship company on the other side, and who had been waiting for some time for the *California*. Their plight was in general a melancholy one, and in many cases pitiable. There were at that time no wharves either on the Chagres or Panamá side, passengers being carried ashore on the backs of the natives, to make their way as best they could with

their baggage across the Isthmus. New conditions of living, unwonted exposure, tropical fruit indiscreetly partaken, and a fever-breeding climate, worked disaster, many falling by the way stricken with disease who perished miserably. Of those who survived, 400 were received on board the *California*, which had not accommodations for half of that number, while the majority were compelled to await the arrival of the *Oregon*. But by the time the latter appeared the crowd at Panamá was greater than a month before, and the same struggle to secure passage occurred as in the case of the first steamer. About 500 were allowed to come on board, while the remainder were left to take their chances on any already crowded sailing vessel putting into Panamá on its way up the coast.

The vessels engaged in the regular mail service were only a portion of the fleet which the Pacific Mail company soon owned or controlled. The list in 1851 was as follows:

NAME OF VESSEL.	COMMANDER.	TONNAGE.
California	Lieut. Thomas A. Budd	1,100
Oregon	R. H. Pearson	1,100
Panama	J. J. Watkins	1,100
Sarah Sands	Charles Ellsley	1,200
Tennessee	George A. Cole	1,300
Northerner	Henry Randall	1,100
Carolina	R. L. Whiting	600
Unicorn	Captain Nicholson	700
Columbia	A. V. H. Leroy	800
Sea Gull	Captain Eyre	....
Fremont	.....	600

The *Golden Gate* of 2,067 tons was added at the end of the year.

The following steamers belonging to the United States Mail company, and known as the George Law line, were also running on the Pacific side in 1851, namely, the *Columbus*, Lieutenant John McGowan commanding; the *Antelope*, Captain E. H. Ackley; the *Isthmus*, Lieutenant Douglas Ottinger; the *Repub-*

lic, Lieutenant W. H. Hudson. These vessels were transferred not long after to the Pacific Mail company. Of other steamers running to Panamá, the Sandwich islands and along the coast at this early day, there were the *Chesapeake*, Captain Ward; *General Warren*, Captain Thomas Smith; *Union*, Captain James Marks; *Commodore Stockton*, *Goliah*, Captain George Flavel; *Commodore Preble*, Captain Calvin Bellard; *New World*, Captain Hutchins; *Constitution*, Lieutenant S. B. Bissell.

As to the price of passage to New York or New Orleans during the first few months of the gold rush, it was whatever their cupidity inspired the company's agents to demand. It was finally fixed at $400, and in 1851 was reduced to $300 for first-class fare; from $290 to $230 for second-class fare; and from $200 to to $165 for steerage passage. The receipts for a single trip on passengers and freight were from $300,000 to $500 000, according to the size of the vessel.

This cursory glance at the transportation facilities so quickly gathered on the Pacific coast brings me to a notice of the means by which the two oceans were at length united. Between the Atlantic and Pacific were about fifty miles of jungle, forest, and mountains, with only a crooked and insignificant river, the Chagres, as a channel of partial water transportation between them, and with no better means of navigation than the native *bungos*, supplemented, west of Cruces, by pack-mules.

Here, again, may be noticed one of those coincidences to which I have referred as touching the destiny of the west coast of America. After many years of fruitless projects and idle speculations upon a canal across the Isthmus by the United States and foreign governments, the former in 1846 entered into a treaty with New Granada for the right of way across the Isthmus of Panamá, "upon any modes of communication that now exist, or that hereafter may be constructed," our government undertaking to preserve

the neutrality of the Isthmus, and to maintain the sovereignty of New Granada. Upon the establishment of a mail route to the Pacific coast arrangements were made with that government to transport the mails between Chagres and Panamá on the arrival of the steamers at either port— service which was very indolently and imperfectly performed—for the sum of about $49,000 a year.

At length it was proposed to build a railroad. This was no new idea as applied to interoceanic transit, a survey of the Isthmus having been made in 1827 by order of President Bolivar, with a view to ascertaining the best line either for a railroad or canal from sea to sea, a report being made in favor of a canal; but Bolivar having died, there was found no one with the enterprise to undertake so great a work. But the traffic which arose under the stimulus of California immigration and commerce evidently demanded the relief of rapid transportation, and seemed also to justify it, while at the same time the great amount of mail matter passing to and fro imperatively required different handling from that which it received from the New Granadan government.

On the 15th of April 1850 a company, consisting of William H. Aspinwall, Henry Chauncey, and John L. Stephens, contracted with the government of New Granada, binding themselves to construct a railway across the Isthmus, upon terms considered favorable to both parties, and within a given time. It did not appear a great venture to undertake a road of this length, which might cost a couple of millions, and take from one to two years to bring to completion; and the New Granadan government having resigned the mail contract for the Isthmus to the railroad company, it was expected that great profits would be speedily realized.

But the company had an invisible enemy to combat. Every mile of their progress through the hitherto undisturbed swamps on their route released a deadly

malaria, that swept off the imported laborers by thousands. The world will never know how great was the sacrifice of human life which gave it the Panamá railroad. Native labor could not be depended upon, and the resources of the country were inadequate. Delay occasioned expense, and cost accumulated upon cost until the railroad company was well nigh driven to the wall. But with the help of the government in large mail contracts, it fought its way through the obstacles opposed to it, completing in January 1855 the work inaugurated in January 1850, this success being largely due to the ability of the superintendent, George M. Totten. Instead of one or two, the cost of the road was eight million dollars, over one million of which was earned by the road as it advanced after 1851. Over this highway for many years, or until the British steamship trade by the straits of Magellan was developed, and the first transcontinental railroad in the United States was completed, passed far the greater part of the merchandise going to or from Europe, the United States, and other countries. With the increased facilities for interoceanic transit, it has still a net income of between two and three millions annually. It was sold to the Panamá Canal company in 1881 for $17,500,000. In 1848, when the first mail steamship for the coast was building in New York, the first cargo of English and French goods that ever crossed the Isthmus was delivered at Chagres from the Royal Mail steamer *Fay*, and crossed in wheeled vehicles, brought for that purpose, to Panamá, where they were reshipped to Chili and Peru. The Royal Mail in 1850 became a branch of the Pacific Mail, having contracted to forward treasure to the bank of England delivered to it by the latter at the Isthmus; such unexpected turns were given to commerce by the Americanization of California.

In the mean time Panamá was not the sole region of interest as regarded inter-oceanic transit. In

1842 the Mexican government under Santa Anna had granted to José de Garay a right of way across the isthmus of Tehuantepec, empowering him to open steam communication between the oceans, and pledging itself to maintain him or his successors in their right to a strip of land from sea to sea. But revolution following revolution, Garay sold his right in 1846–7 to Manning and Mackintosh, English subjects residing in Mexico, and the transfer was recognized by the Mexican government. When negotiating the treaty of Guadalupe Hidalgo, President Polk offered Mexico $15,000,000 for a right of way across the isthmus of Tehuantepec; but this was refused on the ground of a prior claim. Nevertheless, when P. A. Hargoies, an American, had purchased the grant of Manning and Mackintosh and was surveying it in 1851, the Mexican congress declared void the decree under which an extension of time had been granted to Garay, which thus revoked his rights; and to the remonstrance of the United States government they replied merely that it was "a matter of Mexican law." In 1853, however, A. G. Sloo was permitted to form a company in Mexico to construct a plank road across Tehuantepec, and the Mexican government proposed to the United States to enter into treaty obligations to protect this highway, such as had been agreed to in New Granada, but our government thought this quite another matter, and so nothing came of Sloo's project.

However, in March 1855, the Gadsden treaty having given a right of way to the United States, the postoffice department established a mail route from New Orleans to San Francisco, via the isthmus of Tehuantepec, and advertised for bids, none of which were received. In December 1857 this route was again advertised, and one proposal was received and declined; but in June 1858 a contract was finally made with the Louisiana Tehuantepec company, which agreed for $250,000 to transport the mails to San

Francisco and back twice a month, the route being via Minatitlan, Suchil, Ventosa, and Acapulco, to be conveyed in ocean and river steamers and coaches or covered wagons, the service to commence in October 1858, and to expire in September 1869, at the same time that the Pacific Mail and United States mail contracts were to expire. The time to be occupied in the transit to Acapulco was fifteen days. At this port mails were to be exchanged with the Pacific Mail, whereby, if close connections should be made, six days might be saved between San Francisco and New Orleans, and one between San Francisco and New York; or by use of the telegraph from New Orleans, six days. This contract was to test the practicability of the Tehuantepec route.

The land portion of the transit across Tehuantepec consisted of 100 miles of a badly graded mountain road, unfit for travel and over which the lighter portion of the mails only could be carried. That the public had little confidence in it was evident from the fact that only $5,276.68 postage money was received from mail matter sent over it. This was a clear loss to the department of $244,723.32 for the experiment, and this point as a mail route was abandoned in 1859. It was not, however, abandoned as a route of travel, being several times resorted to for a season by competing companies.

Another transit across Mexican territory was proposed as early as 1850. Foreseeing that the government would ever be seeking the shortest and most expeditious routes for the mails, Albert C. Ramsey of Mexico and Edward H. McCormick of Pennsylvania, with their associates, submitted proposals to the postal department for carrying the mails between New York, New Orleans, Vera Cruz, and San Francisco, which were not regarded at that time. Ramsey, several years previous, had obtained a grant from the Mexican government, permitting him to transport passengers and mail through that country for a term

of fifteen years, and in January 1851 actually caused to be conveyed to Vera Cruz eighty-six passengers in the steamship *Alabama*, the first steamer of the Mexican Ocean Mail and Inland company, Robert G. Rankin president, and of which he was a member. Among them were officers and engineers of a railroad which he contemplated constructing between the two oceans.

In 1852 congress passed an act proposing to give any company the option of accepting $100,000 a year for five years to transport the mails three times a month to Vera Cruz via Tampico, in steam vessels of not less than 800 tons and of the best construction. This offer appears to have been accepted by the Mexican Ocean Mail and Inland company, which, confident of success in securing the whole route to the Pacific, despatched agents to Mexico to improve or open roads; while coaches, harness, mules, and horses were purchased, and a portion of them sent out in advance of any further negotiations, as a means of inducing the postmaster-general to accede to their plans, which he did to the extent of entering into a contract in March 1853, conditioned upon the action of congress in making the appropriation of $424,000 to be paid annually, the company to continue their tri-monthly trips to Vera Cruz, and to extend two of them to San Francisco, the mails to be put aboard the Pacific company's steamers at Acapulco. Sureties for the performance of their contract were given by Silas C. Herring, Elisher Townsend, Simeon Draper, Robert B. Coleman, Charles Morgan, Edwin Bartlett, and William H. Aspinwall.

At the time the contract was made, which covenanted to convey the mails in sixteen days each way, the Pacific Mail company was running steamers weekly to Panamá; but very soon afterward it withdrew the intermediate lines, whether intentionally or not, and it became impossible for the Mexican Mail to keep its contract without first placing steamers of its

own on the Pacific side, or inducing the postmaster-general to change the schedule time on the Vera Cruz route. The first they were not able to do, the last the postmaster-general refused to consider, and this line of transit was abandoned, with loss to its projectors. In all these undertakings the people of the Pacific coast were vitally interested, the matter of celerity in the conveyance of mail and freight being of the highest consequence.

The third competing route between the two oceans was via the isthmian state of Nicaragua. This route had been surveyed for a canal in 1837–8 by the Nicaraguan government, but the estimated cost of $30,000,000 had deterred the state from attempting its construction.

In 1849 an arrangement was entered into between the Nicaraguan authorities and the American Atlantic and Pacific Ship Canal company, of which Cornelius Vanderbilt, Joseph L. White, and Nathaniel H. Wolfe were the principal stockholders, for a right of way through that country. Another company was formed under the name of the American Accessory Transit company of New York, of which Vanderbilt and associates were the principals, which provided for the transit of this Isthmus, in steamboats and carriages, via the river San Juan de Nicaragua, a distance of ninety miles, across the Nicaragua lake forty miles, and by land carriage twelve miles to the Pacific at San Juan del Sur.

This company made a proposition to the United States government, in March 1851, for the transportation of the mails between New York and San Francisco, the service to be performed in six steamships of the first class, for $30,000 each annually, a single trip to occupy twenty-five days at the longest. No aid was asked from the government in advance, as in the case of the Pacific Mail and United States Mail companies, but the ships were placed at the disposal of the government in the event of war. The secretary

of the navy, however, declined the proposal of Vanderbilt, arrangements having been already completed for extending the mail service via Panamá, at a high cost. This rejection of his offer did not deter the Vanderbilt company from establishing the Independent line, which in the summer of 1851 placed its first vessel, the *Pacific*, on this side of the continent, in connection with the *Prometheus* on the Atlantic side. A sharp competition for passenger and freight business followed between the Vanderbilt and Aspinwall lines, the former having a fair share of the trade.

Vanderbilt's enterprise in Nicaragua was not an original idea, any more than Aspinwall's had been in New Granada. A franchise had been granted in 1823 to persons in London to construct a canal across the Nicaraguan isthmus, who failed to carry out their proposed undertaking. Another company in New York secured similar privileges, and also failed, after which various schemes were broached to the Nicaraguan government, and, like their predecessors, disappointed the consenting powers. In 1829 the king of Holland had in view the construction of a canal across Nicaragua, but was prevented from carrying out his design by the loss of Belgium.

In 1837 President Marazan inaugurated an interoceanic canal at this point, which was interruped by revolution, and ended with his government. Nicaragua afterward undertook to continue the work, without result. These efforts were followed by others in Europe from 1839 to 1842. Meanwhile John Bailey, for the London parties first mentioned, completed a survey, which was published in 1843, and in 1846 Louis Napoleon became interested in the project of a Nicaraguan canal, but was diverted from it by more personal affairs and the jealousy of Great Britain. Another route than Bailey's was projected in 1847–8 by Orsted, who selected the narrowest neck of land between Nicaragua and Salinas bay. All these manifold projects came to nothing, and an American ship-

builder was the first to open communication across this isthmus, although not by means of a canal. Time was too precious in the fifties to wait for canal-making. A railroad would then have been better for all purposes, but the progress of the Panamá railway was not encouraging. A number of canal projects have been considered since Vanderbilt formed his Accessory Transit company, one of which is in progress at present. The successful completion of any canal will lead in time to a competing canal or ship railway in some other part of Central America.

From the foregoing some approximate idea of the amount of capital invested and material consumed, with the profits realized, in naval transportation during all that period when the people, their supplies, furniture, implements of industry, and even their houses, were transported by sea from New York and New Orleans to San Francisco. In 1853 the imports to California were valued at $35,000,000, so rapidly moved events in those remarkable times. It was a period of great waste and reckless extravagance, and one of the most striking proofs of the resources of the country is contained in the fact that it grew richer, notwithstanding the tremendous amount of capital sunk in fruitless undertakings.

Among the fruitless undertakings, however, Mr Vanderbilt's cannot be reckoned. His Nicaraguan route enjoyed sufficient popularity to make it a formidable competitor of the Pacific Mail, a desideratum with the government, which paid a price far too high for mail transportation, as well as with Californians, who were taxed enormously for any transportation services. The government was placed in a dilemma, neither horn of which it much desired to grasp; for extortionate as was the price asked for its services by the Pacific Mail and its auxiliaries, it feared to end its existing contract and make a new one with the rival company, lest competition should thereby be driven off and a new monopoly created more oppressive than

the old one. Under an advertisement which was issued to obtain information in March 1853, the Nicaragua company offered to carry a semi-monthly mail between New York and California for a sum not exceeding $300,000, or a weekly mail, which was demanded, for $600,000—the amount being then paid for a semi-monthly service amounting to $757,977, including $119,000 paid annually to the Panamá railroad company. In August 1853 a petition was sent from San Francisco, numerously signed, asking for the establishment of a mail line to the Atlantic states via Nicaragua, which the government declined to accede to, the Pacific Mail contract having six years to run, and being so expensive as to preclude the establishment of another.

Meantime the Nicaragua route was coming into an unlooked for notoriety through the armed intervention of citizens of the United States in the affairs of that revolutionary country, as well as through its own unique features. The carriages for the land portion of the transit built in 1854 had eliptic springs, seats arranged lengthwise, stationary tops, and sun and water proof curtains. The seats were cushioned with stuffed backs, and each carriage accommodated eight or nine passengers, with twenty inches of space between them. They were provided with good brakes and drawn by four mules each. The carriages were painted white, with light blue stripes, the Nicaraguan colors, mingled with the stripes of the American flag. The panels were ornamented by emblematic paintings of scenes in California and Nicaragua. Imagine a procession of twenty-five of these highly decorated vehicles, followed by another procession of baggage-wagons! New and large steamers were being introduced on the river and lake, which had comfortable staterooms, showing a determination to leave nothing undone to make the route a popular one.

But it is not always the thing we have in contemplation which prevails. The United States by its

treaties with Mexico and New Granada had secured the right of way across both of those republics, and was endeavoring, still unsuccessfully, to obtain a right of transit of the northern extremity of the isthmus of Tehuantepec at the time that the route through the state of Nicaragua was being put into operation by private enterprise, under a grant to the Accessory Transit company, or the men who composed it.

At this point in the history of that country occurred two important and auspicious events, both tending to the destruction of that neutrality in the isthmian states which it was believed had been secured by the convention of April 19, 1850, between Great Britain and the United States, by virtue of which it was intended to be established One was the persistence in invasion by a British expedition of the state of Nicaragua, upon the pretense of exercising a protectorship over a small band of Indians so obscure as to have no tribal name, and who could not by any possibility constitute a state in need of intervention, who had their habitat at or near San Juan del Norte, which port was the necessary terminus of any canal or railway across this isthmus within this state. The other and similar infraction of neutrality was the filibustering expedition of William Walker, who, under the pretext of going to the assistance of the republican party in a domestic revolution against the aristocratic party in Nicaragua, was really carrying on a war of conquest. As early as 1853 Walker had his recruiting agents in California, and one Henry P. Watkins was prosecuted and convicted of violation of the neutrality laws of 1818 for enlisting men within the United States to serve in a foreign country. A confederate, Frederick Emons, pleaded guilty to the same offense. In 1854, Walker being then in Lower California, the French and Mexican consuls at San Francisco were engaged in the secret enlistment of troops for Mexico, and the French consul was tried for the offense in San Francisco, the jury disagreeing.

After these first exhibitions of the majesty of the law, the authorities became lax, making no arrests and no attempts to intercept the embarkation for Mexico of men suspected of a design to join the invaders, either in California, New Orleans, or New York, the filibustering movement being carried on under the cloak of colonization schemes. In 1855 Walker received a grant of 55,000 acres for settlement in Central America, while followers continued to flock to him by the steamers of the Vanderbilt lines on either side of the continent, until the Nicaraguan republicans began to suspect that their seeming ally was really their master, and the legitimists to entertain a feeling of suspicion toward the Accessory Transit company as accessory to the attempted conquest.

A controversy arose in 1855, which was forced by the Nicaraguan legitimist party, concerning the condition of accounts between the company and the government. Before the commissioners appointed to settle the dispute had proceeded to business, Walker had set up his government, and in January 1856 was allowed to take, by connivance of the agent of the Transit company, $20,000 in specie from one of its boats *in transitu*, to aid him in his filibustering. The attention of the company in New York being called to the subject, a resolution was passed to carry "no more men whose fare was not prepaid." In February following, the Rivas-Walker government made a decree revoking and annulling the charter and acts of incorporation of the Accessory Transit company, and directing all the company's property of that place, valued at from $700,000 to $1,000,000, to be seized. It consisted of the steamers *San Carlos, La Virgin, Central America, J. Ogden, C. Morgan, J. L. White, H. L. Bolware, Colonel Wheeler, J. N. Scott, E. L. Hunt, H. L. Routh*, and two others incomplete, besides a railroad track, twenty-nine launches, lighters, yawls, and rowboats, with wharves, office and warehouse buildings, shops, machinery, and other material.

This was the valuable property which the Nicaraguans were willing to sacrifice in order to rid themselves of the accursed invaders, and Walker being linked with the revolutionary party, was compelled to use force in his military movements, thereby increasing the hostility that was cherished by the native population toward the transit company.

The imbroglio ended in the massacre, by the army of the Costa Ricans, April 7, 1856, of nine inoffensive passengers of the transit company, the wounding of many more, and the robbery of all, with other outrages, and the burning of the company's wharf at Virgin bay on the lake, where the slaughter took place. Nor was this the first offence against international peace, the government having found it necessary to order the *Potomac*, flagship of the navy, to visit San Juan de Nicaragua in November previous on account of the murder of passengers. This vessel had subsequently been withdrawn. But there was the British sloop-of-war *Eurydice*, Captain Tarleton, lying in the harbor when the *Orizaba*, Captain Edward L. Tinklepaugh, arrived at San Juan, on the 16th of April 1856, and began to transfer passengers to the *Wheeler*, a river steamer. After most of them had delivered up their tickets, and been transferred, the agent of the transit company, Joseph N. Scott, was notified by the commander of the *Eurydice* that the passengers would not be permitted to proceed on their way, but must return on board the *Orizaba*. The excuse rendered to Captain Tinklepaugh for the action of the British captain was that he had been told that the *Orizaba* had brought out five hundred men for Walker; and when remonstrated with, Captain Tarleton went on board the *Orizaba* and examined the waybill, when, having satisfied himself of the incorrectness of the information, he consented to allow the passengers to depart for California. On his arrival in New York Tinklepaugh entered a protest against the insult to the American flag in the assumption of

the right of search by a British commander, which matter was left to be presented by a United States commissioner to the government to be settled.

By these events, all owing to Walker's filibustering, communication by the Accessory Transit route was interrupted. In August he confiscated all the property of the company, making a grant to Edmund Randolph and others of San Francisco of certain rights which were purchased of Randolph for $400,000 by C. K. Garrison and Charles Morgan, former agents of the company, who attempted to procure the dissolution of the charter of the transit company, and to have a receiver appointed. But the supreme court of New York refused to recognize the right of the president of Nicaragua to do a judicial act, or forfeit a charter not forfeited by any fault of its owner. Garrison and Morgan, who held liens upon the company's property, attempted to reorganize the route, while Walker, receiving several hundred recruits, fought a number of battles with success against the legitimists and Costa Ricans. The republicans were, however, becoming more and more weary of war, and were anxious to destroy the transit company as one means of getting rid of Walker and the American army under him, while Walker himself was exhausting his means as well as that of the enemy, and his army, ill-fed, badly clothed, and dying off by disease, was being as rapidly depleted as recruited. In December he seized for his use two hundred mules belonging to the transit company, which, under the Garrison management, was again in operation, leaving transportation for no more than fifty passengers over the land part of the route, and compelling the greater portion of them to walk from the lake to the sea. Many lost their baggage. many died of cholera, and the end of the transit company was not far off. The agents of Vanderbilt and of Morgan and Garrison were at Greytown disputing possession of the property with the Nicaraguan authorities, while Vander-

bilt was said to be furnishing money to the Costa Rican government, which was also aided by the British naval authorities. Every effort was being made to keep open the route, when Walker experienced a severe repulse and loss. The Costa Ricans took Greytown, and the ships of the American, Atlantic, and Pacific Ship Canal company were compelled to carry their passengers to Aspinwall, while the vessels of the company on the Pacific side were sent to meet them at Panamá. Even this did not entirely end the usefulness of the Nicaraguan route, and steamships soon resumed their connection with it. The winter of 1856-7 was spent by Walker at Rivas, on the west side, while Mora, the Costa Rican general, remained at Greytown, and in possession of the lake steamers.

In January the supreme court of New York, upon certain representations, appointed a receiver of the property of the Nicaragua Transit company, ordering sold the steamships *Prometheus*, *Northern Light*, *Star of the West*, and *Daniel Webster* belonging to the company, and allowing Vanderbilt to bid at the sale to the extent of his liens on the vessels, the remainder to be deposited with the court. But so far as the transit across this isthmus was concerned, it was first in the hands of one party and then in possession of the other, a steamer being now and then captured, and used for the conveyance of troops from point to point. In April a battalion, under Colonel Lockridge, of Texas, having taken possession of the steamers *Rescue* and *J. M. Scott* for the purpose of attacking the Costa Rican forces, the *Scott* exploded her boiler at a landing, killing thirteen officers and men, severely wounding eleven, and injuring eighteen. The survivors, to the number of 374, made their way to Greytown, where, not being received on board the *Tennessee* about to depart, and being without means, they seized the *Rescue*, with the arms on board, and offered them in pledge to the mayor of Greytown as security for their

subsistence. They were subsequently received on board the British men-of-war *Cossack* and *Tartar* on promising obedience to rules; but, finally, on application of the British commander, the agent of the transit company consented to send a portion of the men to New York at the expense of Morgan & Co., or if his draft should not be honored, at the cost of the British officers, who besides, carried the remainder of the companies to a United States port. Thus was lessened by an accident the army of invasion; and although Walker still fought three engagements, the ravages of disease and frequent desertions reduced his force to 200 men, and in May he capitulated by the intervention of Commander Paulding, of the United States flagship in the Pacific, the *St Mary's*, and was escorted to Greytown, where he took passage for New Orleans, resuming his revolutionary schemes the following year in Honduras, where he was taken and shot.

Soon after these events W. R. C. Webster on behalf of the Costa Rican and Nicaraguan governments, and C. K Garrison on the part of Garrrison and Morgan, entered into negotiations with Lord Napier and the United States government for a settlement of the Central American question. No definite arrangement was for some time entered into; but in 1858, President Buchanan having expressed his disapproval of filibustering, a treaty was concluded between the United States and Nicaragua by which the former became entitled to the right of transit across the latter state "on any route of communication, natural or artificial, whether by land or water, which may now or hereafter exist, or be constructed under the authority of Nicaragua, to be used and enjoyed in the same manner and upon equal terms by both republics, and their respective citizens; the republic of Nicaragua, however, reserving its right of sovereignty over the same." The United States also agreed to protect and preserve the neutrality of the

route, and Nicaragua promised to maintain a free port at either end; and when occasion required to keep open the route by force of arms, or permit the United States to do so. The right to transport closed mails across the country at any point was also granted. These concessions did not come altogether cheerfully from the Nicaraguan republic, the president refusing to sign the Cass-Yrissari treaty, after having pledged himself to Lamar to do so, compelling Cass to write a caustic letter, and the government to send a naval force to each side of the country.

The Nicaraguan government meanwhile revoked the charter of the transit company, but subsequently granted a new concession to Cornelius Vanderbilt, Horace F. Clark, and their associates, giving them as a perpetual company the exclusive right of conveying passengers across the country by San Juan river and Lake Nicaragua. For this monopoly of the transit route Vanderbilt loaned to the impecunious Nicaraguan government a sum in specie said not to exceed $100,000, for which he received interest at seven per cent per annum, the negotiations being conducted by W. R. C. Webster. In this simple manner was foiled the intention, if such existed, of Louis Napoleon to take military possession of the country, and the Monroe doctrine sustained.

But while Americans had possession of the isthmus transit the people in the United States were not benefited. Walker's filibustering had deprived them of the opposition necessary to reduce the exorbitant fares and freights collected from them by the Pacific Mail company. Walker being disposed of, they had still to confront a greater than he, which was the selfishness of capital. For some time after the interruption of traffic across Nicaragua the vessels of the company carried their passengers and cargoes to Panamá, and several of their ships were brought round to the Pacific coast to carry on their trade on this side of the continent, but they ceased in

1857 to make their usual voyages, leaving the ocean transportation between New York and San Francisco entirely to the Pacific Mail.

In May 1857 a company was organized, under the name of California and New York Steamship company, and commonly known as the People's line, with a capital of $1,000,000, divided into 4,000 shares of $250 each. Stock was immediately taken to the amount of $300,000, and the prospect seemed bright for a successful opposition. It was designed to construct steamships of a large size and great speed, and to do away with the steerage by selling only first and second class tickets, and to fix the rate of passage at an average of $100. The president of this company was Marshall O. Roberts, the vice-president being N. O. Arrington, and the directors Jules David, M. S. Martin, Frederick Franks, Eugene Delessert, R. Kellersberger, W. Hanley, Leland Stanford, W. J. Balley, R. W. Heath, G. Touchard, E. L. Sullivan, Lafayette Maynard, E. S. Holden, and James Ludlow, secretary. But after advertising a few times no more was heard of it.

In March 1858 Garrison & Co., who had the agency of the Nicaraguan route, advertised to run their vessels to Panamá until the transit route was reopened, and did perform one trip and advertise a second, when the opposition was withdrawn, five days before the date of sailing. The rates of passage, which had been put down to $50, $100, and $150, according to class, were at once raised to $125, $200, and $250 for the same accommodations. Many persons who had gathered in from the interior expecting to take passage were disappointed, and public meetings were called to discuss the situation of affairs, with no other result than to yield, as yield they must, to the company's demands. Soon after it was rumored and published in the New York newspapers that Vanderbilt had accepted a subsidy of $56,000 a month from the Pacific Mail to withdraw his steamers.

This proceeding was a heavy blow at the prosperity of California, from whose population chiefly was drawn the coin which enabled the Pacific Mail to buy off its competitors. As for steamship owners, they found business along the coast, the different mining excitements furnishing employment. A San Francisco journal made a statement in June 1858 that the passage money paid out in the spring of that year in getting to Fraser's river in British Columbia amounted to $270,810, and inquired the length of time it would take the miners to earn that amount of money besides their other expenses.

Still another opposition scheme was broached in July 1858 by an organization calling itself the People's California Steamship company, composed of a number of capitalists in California and the east. The capital stock of this company was placed at $1,500,000, divided into 15,000 shares, at $100 each, which proposed to construct or purchase eight first-class screw steamships of 1,600 tons register, capable of carrying 750 passengers each, with freight, or 1,200 without. It was expected to charge $175 for a first-class passage, and $75 for second-class, which, with freight and treasure, without express matter or mails, was calculated to produce a total income of nearly $2,000,000 by running six steamers only. The expenses were estimated to amount to $1,317,780. Among the projectors of this line were W. T. Coleman and D. O. Mills, either of whose names was a guaranty of good faith.

Meanwhile Vanderbilt, who was inspired by the ambition to break down the Tehuantepec company, which was making a strenuous effort to open that route, was slowly building up the transit of Nicaragua by providing lake boats, and promised to have the whole line open by September 1858. It was not, however, opened that year, but in January 1859 the company commenced running steamships to Panamá in opposition to the Pacific Mail, the *Orizaba*, *Cortés*,

Uncle Sam, and *Sierra Nevada* being brought to the Pacific side, while the *Star of the West*, *Northern Light*, and *Ariel* performed the service on the Atlantic side.

It transpired soon after that Vanderbilt had become a controlling power in the United States Mail company, which news was received in California as unfavorable. Indeed, serious charges were in turn brought against all the steamship companies. It was said that agents were in collusion with ticket swindlers in New York, who had their offices in the immediate vicinity of the office of the company, and who were allowed to use the company's posters. The unwary were induced to purchase tickets at these places, and were sold steerage for cabin accommodations at cabin prices, or, if ignorant enough to be altogether deceived, were sold utterly worthless tickets, which were rejected at the steamer. Even the company frequently disposed of many more cabin passages than they were warranted in doing, and the unfortunate passengers, after having paid for comfortable service, being compelled to sleep on tables or on the floors, and for eight or ten days to endure the wretchedness of homelessness, and perhaps of illness, without a place to lay their heads or proper food to eat. It was the boast of the Californians that such outrages were not perpetrated by the Pacific Mail company, and when the miserable victims of the other systems were groaning out their troubles, they were consoled with the assurance that "it will not be so on the other side," as if crossing the isthmus was to bring them into an atmosphere of greater honesty as well as magnificence; where, indeed, the ships were well officered and commodious, and the sea more pacific than on the Atlantic coast. But wrong was perpetrated as well here as there, for the ships on this side took all they could carry, knowing there were not accommodations on the Atlantic side of the Isthmus.

The effect of the Walker-Vanderbilt policy in Nica-

ragua in 1856 was to stir up a feeling of hostility throughout Central America toward citizens of the United States, which showed itself on the 15th of April of that year in an attack upon the passengers of the steamers *Illinois* and *Philadelphia* from New York and New Orleans, and the *Cortés* of the Nicaraguan line, in transitu at Panamá, in which affair fifteen Americans were killed and fifty wounded, with a total destruction, after plundering, of their baggage at the railroad station and hotels. The ostensible reason at the time was a quarrel between a passenger and a fruit-seller; but from the fact that a concerted action was apparent, and that the police joined in the attack upon the company's freight buildings, which contained over a thousand unarmed men, women, and children, it was evident there existed a previous grievance which the massacre was designed to avenge.

For four days, from the 15th to the 19th, the suffering people were huddled in the company's offices waiting for the appearance of the *Golden Age*, which was to arrive with passengers from San Francisco. By the exertions of the United States consul, Thomas W. Ward, A. J Center, the superintendent of the Panamá railroad, A. McLane, agent of the Pacific Mail, G. M. Totten, chief engineer, and W. Nelson, further mischief was averted, and the passengers permitted to proceed upon their voyage in the *Golden Age*, while the California travellers were hurried by the railroad company to Aspinwall, and embarked for New York. The property destroyed was valued at half a million dollars, which would have been much more but for the prompt action of a railroad conductor named Williams, who, knowing that the express train from Aspinwall was due, ran out on the road to meet it. At the bridge over the Cruces there were 150 natives collected to intercept this train, who stopped and robbed Williams, being prevented from shooting him by the interposition of some acquaintances from Panamá. Regarding him as a fugitive

only, he was allowed to proceed, after being compelled to instruct them how to take a rail out of the track in order to derail the express. Hastening forward he signalled and stopped the train, which returned to Aspinwall with him on board, thus putting the company on their guard at this end of the road.

It was plainly shown that the authorities of New Granada participated in these outrages, and the only excuse which they ever offered was that there was some misunderstanding or disagreement between the government of that state and the railroad officers concerning dues. But as this was an explanation entirely inadequate to the offence, it is but reasonable to believe that sympathy with Nicaragua and hatred of the Yankees, crying to each other, "Vamos a matar Yankees!" as soon as the riot began. Like the Nicaraguans, they would have been glad to have destroyed the transit through their territory which had brought them in contact with a race which they feared were destined to become their masters. As to the motives which were back of the Walker invasion, which led Vanderbilt to aid and abet it, or a California senator to stand its friend and almoner when appropriations were being made by congress, these belong to a different class of subjects. The effect was to deprive California of competing lines of transportation, subjecting the state to a condition of vassalage toward a powerful company or combination of companies, deterring immigration, and retarding the development of the country.

Let us now return to the commercial history of the original line. During the ten years from 1849 to 1859, while the Pacific Mail Steamship company enjoyed the government subsidy under the form of a mail contract at exorbitant rates, its career, notwithstanding the various competing routes and lines, was one of uninterrupted prosperity, during which time it received, over and above its returns from the trans-

portation of passengers and freights to and from California, nearly half a million dollars annually, or its proportion of about a million, which was paid on the contracts of 1849 and 1851, and some special contracts of different dates.

Some idea of the cost of establishing and maintaining the original steamship line between New York and San Francisco may be gathered from the statement of the president of the United States company on the Atlantic side to the postmaster-general in 1857 of the original cost of the steamships employed in the mail service on the eastern end of the route.

Ohio	$ 450,000	*Empire City*	$ 225,000
Georgia	475,000	*Crescent City*	175,000
Illinois	475,000	*Cherokee*	150,000
Central America	300,000	*Philadelphia*	175,000
Moses Taylor	250,000	*United States*	120,000
Falcon	150,000	*Star of the West*	150,000
	$2,100,000		$ 995,000
			2,100,000
			$3,095,000

Out of this number of vessels three, of the value of $625,000, had been lost; four, of the value of $1,195,000, were sold at a loss by deterioration of $976,000; the remaining vessels were estimated as having a value at that time of $750,000—which estimates exhibited a loss upon the original investment of $2,126,000. But even at that rate of loss, it will be seen that the company must have received from the government in ten years enough to pay the first cost of its vessels, and its losses besides; hence it had to bear only the cost of running its vessels out of the income from its enormous and richly paying business. President Marshall O. Roberts further stated that only $400,000 had been paid in dividends in the eight years during which the company had then been in the actual business of transportation, which dividends reduced the losses to $1,945,000, the inference being

that out of the large receipts for mail pay and passenger and freight traffic there was no profit, but on the contrary the loss of interest on the capital invested, if not of the capital itself. But this, I think, must be regarded as special pleading, there being a memorial then before congress asking for pay for extra service.

In the report of the president of the Pacific Mail company in June 1858, it was stated that this company had various assets, to the value of $509,480.90; thirteen vessels, valued at $2,020,471.70; a reserve fund of $299,606.93; coal on hand valued at $307,075; outfits and supplies worth $114,600.25; shares in the company's stock in trust for property sold held at $171,300; storeships, launches, etc., worth $62,667; machinery and tools valued at $121,700; real estate at Panamá, San Francisco, and St Helen, Oregon, valued at $408,418.65; cash in the hands of agents to the amount of $59,049.47; a claim of $44,775 on the government for the transportation of troops; and a surplus of $423,246 with which to make a dividend; or in all, between four and five millions, which was a reduction, according to the New York *Tribune*, of $800,000 in the valuation of its vessels, and $200,000 in the value of its real estate, or of $1,000,000 from the estimate of the previous year. Corporations have ways of contraction and expansion which are not intelligible to ordinary spectators of their movements, nor are they probably meant to be.

The establishment of a transcontinental mail service by the Butterfield route in 1857 had given assurance of the practicability of such a mail carriage, so far as letters were concerned, and Californians were now clamoring for a daily mail; but as none had been provided when the steamship contract expired, Vanderbilt obtained a nine months' contract to carry the mails by steamship for a compensation below one half that which the original companies had received for the service. But what he failed to receive from the government he made up in passenger traffic.

Overcrowded steamers, fraudulent sales of tickets, abuses of every description, were the order of the day in the early traffic with California. Never were corporations oftener anathematized, or more devoutly cursed. The government had been assured that the mails should be carried via the Nicaragua route, to save the extortionate charge of the Panamá Railroad company, which exacted $100,000 a year for the transportation of the mails across the Isthmus; and passengers were assessed $25 each for the same service. The attempts toward opening the Nicaragua route raised many hopes destined never to be realized.

But with regard to the status of the Pacific Mail company at this time, it likewise suffered through the stronger influence of the rival which had superseded it in its relations with the government. Following the new steamship mail contract a company was formed, called the Atlantic and Pacific Steamship company, of which Vanderbilt was the president, and John T. Wright and William S. Freeman agents on the Pacific side. The steamers owned by this company on this coast were the *Cortés*, *Orizaba*, *Uncle Sam*, *Sierra Nevada*, and *Champion*, a new iron steamer of superior construction. On the Atlantic side it owned the *Northern Light*, *North Star*, *Ariel*, and *Moses Taylor*, running to Panamá, and the *Daniel Webster*, *Empire City*, and *New Granada*, running to New Orleans. Among the directors were Charles Morgan, Moses Taylor, and Marshall O. Roberts, while D. B. Allen was agent at New York and secretary of the company. C. K. Garrison had some time previous sold his interest to Vanderbilt and retired from the connection.

This company, the successor in effect, of the United States Mail, was now in full swing on both oceans, carrying the mails and running in opposition to the old mail company. About the same time, as a defensive measure, there was formed on the Atlantic side

the North Atlantic Steamship company, in which the Pacific Mail company became interested to the extent of 4,000 shares, but which was soon drawn off the route to California under a new arrangement with the Atlantic and Pacific company. A contract was entered into for five years from February 17, 1860, in order "to secure harmonious running," as read the official report—by which the Pacific ocean was left to the Pacific Mail company, and the Atlantic service to Vanderbilt's line. The removal of opposition enabled both companies to restore former high rates and also to maintain them. But the means by which the Pacific Mail sought to retain its monopoly of the carrying trade on the Pacific was even more injurious than an opposition would have been; for it was compelled to increase its stock to 40,000 shares, or the limit of its charter, and to purchase from the Atlantic and Pacific company four steamships; namely, the *Cortés, Sierra Nevada, Uncle Sam,* and *Orizaba,* paying for them in shares of Pacific Mail, which gave Vanderbilt a footing in the company, and $250,000 in monthly instalments of ten per cent on its future receipts under the contract. It paid, also, $50,000 option for declining to purchase the *Champion,* which was sent around Cape Horn to New York. On the side of the Atlantic and Pacific, however, it paid to the Pacific Mail its proportion of the mail contract money until the expiration of that contract, or $43,750, and also the mail pay of the Panamá Railroad company, whose contract at $100 000 a year had only until the first of July to run. Under the new arrangement a tri-monthly line of steamers would make its departure from New York on the 1st, 11th, and 21st of each month, commencing in July 1860. The deterioration of steamers was announced to be an average of fifteen per cent per annum, and the company had now seventeen of these ships, on thirteen of which since the last annual report there had been a depreciation of nearly

$300,000. The capital stock and the surplus was reported this year to be $4,911,188.61.

All these matters were anxiously noted by Californians, who, however they might berate the Pacific Mail for its exactions, still greatly preferred its management to that of any rival line. It was, besides, a purely Californian institution, and had been conducted on something like business principles. It had done much while enriching itself to build up the state. It had been in some degree prompt and obliging, as a public servant should be, and altogether was something to name without great shame.

Quite different was the feeling entertained towards the new combination, the hostility to which was intensified by the trouble about mails which are spoken of elsewhere. In order to force the government into a fresh contract after the expiration of the nine months' service, Vanderbilt declined to carry the mails for the postages, while congress disposed of the question of a daily mail service overland, and in order to make an exhibition of his power which should compel concessions, refused to carry Wells, Fargo & Co's express, by which most business men sent their eastern letters, although the Panamá Railroad and Pacific Mail companies had indicated their willingness to carry the mails during the recess of congress, trusting to future legislation for the discharge of the debt.

Seeing that he could do no better, and that there was a limit to the endurance of the government no less than of the people, Vanderbilt finally consented to carry the letter mails for the postages, amounting to $300,000 annually, and the printed matter, which was eight-tenths of the whole mail, for such sum as the president might recommend and congress grant; and under this contract, which was to last until March 4, 1861, the service was resumed.

Soon after the settlement of the mail question, rumors began to be current that an opposition was about to be started, whose route would be by way of

Tehuantepec, and a sharp decline in Pacific Mail stock took place in consequence, which was the more marked because the public press would have it that Vanderbilt was about to reopen the Tehuantepec route, certain significant movements pointing that way, and the Mexican government being apparently in the humor to permit the profitable traffic across its territory.

The public were both right and wrong. In April 1860 the old American Atlantic and Pacific Ship Canal company entered into a new convention with the Nicaraguan government, forming the stockholders into a new company under the name of the Central American Transit company, the capital not to exceed $3,000,000, including the shares issued by the former company. The government of Nicaragua gave the new company the exclusive right of transit for fifty years, without restrictions as to the mode of transit, and the company were to be permitted to do local business in the interior on the same footing as natives, the route to be opened in six months after the ratification of the new grants, unless prevented by low water or the closing of the ports on either side, in which case the time should be extended to sixteen months. The property of the old company was purchased from the Nicaraguan authorities for $35,000, to be paid in annual instalments of $5,000, and the road from Virgin bay was leased to the company for $3,000 a year, with the privilege of laying rails upon it. The company agreed to give the state $200,000 of its stock, and to pay a transit tax of $1.50 a head for each passenger transported across the country. Boats were constructed in the east for the river and lake; the road was put in good condition; a telegraph was constructed from Virgin bay to San Juan del Sur, and a railroad survey between these places completed.

On the 14th of July of the same year there was sent out the steamship *New Granada*, Captain Howes,

belonging to the recently formed Atlantic and Pacific company, of which Vanderbilt was the president, and which had intended to confine its operations to the Atlantic ocean On the 26th of July the *Moses Taylor*, a vessel built in 1858 for the California and New York company, or People's line, to which reference has been made as one of the opposition schemes of that period, was also despatched to the Pacific. The *Granada* arrived off the heads at San Francisco bay on the 14th of October, but was beached and lost through the carelessness of the pilot. The *Moses Taylor*, John McGowan commander, arrived out on the 21st of October, and immediately advertised to run to Panamá as a steamer of the People's line, in opposition to the Pacific Mail, placing its fares at $150, $100, and $75. But before the day came round which had been appointed for sailing, the opposition had been withdrawn, and those persons who had hoped to make a visit to their former home for a few hundred dollars found themselves disappointed.

Nobody understood why these things were so; it was all mystery and the people were bewildered. Those who did not think that Vanderbilt was endeavoring to force the Pacific Mail stock down in order to buy it in, explained the attempted opposition by saying that it was an effort of Roberts, who had a score against his former partner to wipe out because he had been left out of the combination of the isthmus steamship companies. But nothing more was heard for some time of either the Tehuantepec or Nicaragua routes.

Meantime the passenger traffic by the Panamá transit had fallen off greatly, the loss being charged by the San Francisco Solons to the management of the steamship companies, and figures were produced to show it. In the first quarter of 1860 there were 7,059 passengers arrived at Panamá en route to San Francisco. In the following three months there were 5,425, and in the third quarter only

2,592. Departures from California decreased in the same ratio, running down from 3,789 to 2,722 in the second quarter and about the same in the third. In other words immigration in excess of emigration had ceased because of the dread of the sea-passage, hard enough at the best upon many constitutions, but rendered insupportable by poor food and the lack of the ordinary decencies and necessary comforts of travel. Yet it was published in the east that the California steamship traffic was greatly augmented; and that the eastward-bound portion paid all expenses, and left the other part, and the mail pay, for profit, amounting together to $2,160,000 per annum; and dividends of seven and a half per cent per quarter were talked of.

This report brought the Pacific Mail stock well up again in the market, in spite of California denunciation. It was, morever, true that political troubles in the latter part of 1860 drove many persons from the south to California, by both land and sea routes; and, also, that the Oregon line, which was a branch of the Pacific Mail, was a profitable one. In the early months of 1861 the necessities of the government also gave employment to vessels of those companies on the Atlantic side in which the leading capitalists were interested, wherefore affairs proceeded satisfactorily for a time on both oceans.

The year 1860 was otherwise signalized by the increasing transportation by coast lines. In May was inaugurated the Mexican Coast Steamship company, Holladay and Flint principal owners. In September it suspended, but revived again in November, and was continued under a liberal agreement with the Mexican authorities thereafter. In 1861 this trade was estimated to be worth $2,000,000 to San Francisco. The company purchased the deteriorated steamers of the Pacific Mail company for this traffic, and for the use of the California and Oregon Steamship company, of which Holladay and Flint were also the owners.

The *Oregon*, *Panamá*, *Cortés*, and *Columbia* were the boats used in these lines, which made regular trips to San Blas, Mazatlan, Guaymas, La Paz, and Cape St Lucas; to Eureka, Trinidad, and Crescent City; and to Portland and Victoria. The *Oregon* was commanded by Edgar Wakeman; the *Columbia*, by Francis Connor, the *Cortés* by Thomas Huntington; and the *Panamá* by R. H. Horner. A new steamer, the *John T. Wright*, named after its owner, and commanded by Robert Haley, commenced making regular trips to the California ports south of San Francisco in October 1860. The steamers employed at this period by the Pacific Mail on the Panamá route were the *Golden Age*, J. T. Watkins commander; *Sonora*, Captain F. R. Bailey; *St Louis*, Captain W. F Lapidge; *Uncle Sam*, W. H. Hudson commander; *Golden Gate*, R. H. Pearson commander; with occasionally others of the same fleet. Of these, the *Golden Age* was the most commodious, but was surpassed by the *Constitution*, built about this time, and which was the largest of the Pacific Mail line until the China Mail was furnished with a better class of steamers.

Early in 1863 the New York and California company again threatened the Pacific Mail with an opposition via Nicaragua, and, in fact, three successive monthly voyages were performed, when the *Moses Taylor* was laid up at Benicia to be refitted. On one occasion when there were hundreds of people gathered in San Francisco preparing for the voyage advertised, the vessel was suddenly withdrawn. There were indignation meetings held, with street harangues, to express the revolt of the public against this playing fast and loose with their interests—as if a steamship company cared anything for their impotent wrath. And the people could not do what they wished—give up steamship travel. Every vessel out from New York now came loaded with from 500 to 800 and even 1,100 passengers, several hundred of whom had no comforts whatever. The decks which were needed for the

passage of air were piled up with baggage, and there were not boats enough in case of accident to carry a third of these people, or crew enough to handle them. The risks were terrifying; yet such were the necessities of the public that they were forced to take them.

In September 1863 the *Moses Taylor*, by this time known under the sobriquet of the Rolling Moses, was advertised to sail for Panamá, connecting with the *Illinois* at Aspinwall. This lasted until January 1864, when the *America*, William L. Merry commander, having been brought out to the Pacific, was announced to reopen the Nicaragua route. One trip was made via the Central American Transit company's line, when again the vessels were withdrawn, and in March reappeared on the Panamá route, where they continued to run until August, when they returned to the Nicaraguan isthmus, the *America*, now commanded by Thomas H. Morton, alternating with the *Moses Taylor*, and connecting with the *Golden Rule*, of 3,500 tons, on the Atlantic side. The transit, it was said, was in fine order. Concord coaches built expressly for this route were furnished; there were two steamers on the lake and six on the river, the accommodations being ample for 1,200 passengers.

Early in 1866 there was formed in New York the North American Steamship company, the directors of which were William H. Aspinwall and S. W. Comstock of the original Pacific Mail, William H. Webb, and others. Assistant Secretary of the Navy G. V. Fox was the first president, and several of the captains formerly in command of the Pacific Mail took service with the new company, which was to run either to Nicaragua or the Panamá isthmus, the Panamá railroad being bound to strict neutrality. The Vanderbilt contract having lapsed through failure to perform, the Nicaraguan government made a new grant of the right of exclusive transit for a period of ninety-nine years, with a reduction of the annual payments, and more liberal terms generally.

The vessels employed by the North American company were the same formerly in the service of the New York and California company, which seemed to show an identity of interests, although the management was radically different. In 1867 the *Oregonian*, a steamship built in New York in 1865–6 for the Oregon Steam Navigation company, was purchased and added to the company's fleet, and then were constructed for this company the *Dakota*, *Nevada*, and *Nebraska*, all ships of 3,000 tons burden, well officered, and completely fitted for the convenience of passengers. This opposition was the most damaging of any ever set on foot to the Pacific Mail company, and in the contest for supremacy it was difficult to determine which offered the greater inducements to travellers. Fare via Panamá was reduced to forty dollars, and freight to ninety cents a hundred pounds. In addition to a semi-monthly line via Panamá, steamers ran every twenty days via Nicaragua, carrying not only passengers but freight, a thing never before attempted. It was simply a question of money as to which should prevail, the old or the new company, and as the old had the longer purse the rival line was finally forced to withdraw, which it did in the latter part of 1868.

To return to the Pacific Mail. In 1863 it made an arrangement with the Liverpool, Western, and Spanish American Steam Packet company to forward Pacific coast freights from Panamá to Liverpool, London, Havre, Hamburg, Bremen, and other European centres, by which means it was enabled to secure the carrying trade of the Mexican ports destined to Europe. It had a little later, however, to contend with an increasing number of competitors; the Panamá Railroad company having set up an opposition in the Central American Mail Steamship company, owning three vessels, which absorbed a good deal of the coast trade; the Pacific Steam Navigation company, trading between Panamá and Valparaiso, which owned

seventeen vessels; the California Steam Navigation company, which, besides its large fleet of river and bay steamers, also owned three ocean steamships, the *Ajax* of this company having in 1866 first entered upon a route from San Francisco to the Sandwich islands. The coast lines employed five steamers, the total capacity of these various companies, without the *Ajax*, being 24,000 tons, against 22,000 tons in the Pacific Mail's ten steamships owned at that time. The total length of the sea routes covered was 10,000 miles, while 500 miles of river navigation employed twelve steamers. It is interesting to know that there were at this period, 1866, 180 miles of railroad in operation in California, and 5,000 miles of stage lines. Wondrous development of transportation in seventeen years!

Besides the opposition of the North American company, which had cost enormously, the Pacific Mail company had entered into a contract with the government to carry the mail between San Francisco and Japan and China, stopping at the Sandwich islands, for ten years, for the compensation of $500,000 annually; and four new steamships of large size had to be built for this service.

So far as the Hawaiian islands were concerned the contract could not be carried out; for, aside from the fact that steamers of the size of the *Colorado*, which opened the route in January 1867, the *Great Republic*, the *Japan*, the *America*, and the *China*, could not conveniently enter the harbor of Honolulu, the company in preparing for the China trade had to consider the shortest, safest, and quickest route, and they discovered that to obtain it they must steam north of the Sandwich islands in going to Japan, and in returning take the northern arc of the circle followed by sailing vessels, the gain in point of time being four days each way. These and other considerations, but these chiefly, led to the modification of the contract, whereby the Islands were left out, and in place of this part

of the service branch lines were established between points in the China and Japan seas.

The subject of commerce with China from the Pacific coast was as old as the century, and had been written and spoken about in congress and out, year after year, and had been the theme of memorials and petitions from the California legislature and the San Francisco chamber of commerce. As early as 1851 vessels were engaged in the trade between China and California. Clipper ships soon followed, and all prospered. The importance of steam communication was recognized as early as 1850, when the secretary of the navy proposed it, and the senate committee reported favorably upon it. A steamship company for the China trade was organized in 1853, called the Oriental and Pacific Steam Navigation company, composed of C. K. Garrison president, Henry Haight, Felix Argenti, Jesse Carothers, Joseph G. Palmer, Gabriel B. Post, E. P. Flint, James King of William, Thomas D. Johns, N. C. Reed, and George C. Bates, with a capital of $10,000,000. But the company never had an active existence. A subsidized China Mail was proposed by resolution in the California legislature in 1854; the public prints discussed its advantages; magazine writers dwelt upon the grandeur, the poetry, the patriotism of attaching the Orient to the western side of our continent, until the subject threatened to become stale from repetition before the government should move in the matter.

In all of these plans the Sandwich islands were included. Vessels had indeed run to Honolulu with considerable regularity, and even some experimental voyages had been made by the steamers *Frémont*, *Commodore Stockton*, and *Commodore Preble* in 1851, but the inauguration of a regular line was not attempted until January 13, 1866, when the California Navigation company despatched the *Ajax*, a steam screw propeller of 2,000 tons, Christopher Godfrey commander, to open the route. It was soon demon-

strated that the *Ajax* could not compete with the fleet line of clippers, and the company withdrew this vessel after one or two voyages. The decision therefore of the Pacific Mail company that it could not stop its vessels at the Islands was a disappointment to San Francisco, which would have liked such a line, which was commodious and handsomely appointed, between the Golden Gate and the Hawaiian kingdom. The chamber of commerce endeavored to have congress maintain another line to the Islands, with a subsidy of $100,000, the Pacific Mail to take the contract, the negotiations ending, as I have said, by the substitution of branch lines from Yokohama to Nagasaki, Shanghai, and other parts in the inland waters of China. leaving the islands without steam mail service. On the 2d day of March 1867, however, a contract was awarded to the California, Oregon, and Mexican Steamship company, of which Ben. Holladay was principal owner, for $75,000, the service to consist of monthly trips to and from the Islands, carrying the mails. It was begun under this contract in October 1867. In 1868 the Island legislature granted to the California, Oregon, and Mexican company an additional subsidy of $50,000, in consideration of the service being increased to a trip every twenty-one days. This company also obtained a contract at $25,000, for carrying a mail three times a month to Portland, this being supplementary to the daily overland mail by stage, which took five days, whereas the steamers, in fine weather, made the voyage in three days. The trade which the Holladay line secured at the start for the Islands amounted to about 1,500 tons per month from, and 1,000 tons to Honolulu, with a good passenger list which it was calculated would increase twenty-five per cent annually thereafter.

Thus far had the history of transportation gone when the Pacific Mail company made its report in October 1867. According to that statement its previous year's business amounted to $7,639,707.99. Its

running expenses, which included the voyages of the *Great Republic* and *China* from New York to San Francisco, and of the *New York* and *Costa Rica* from New York to Hongkong, and of the *Hermann* from San Francisco to Yokahama, footed up $4,073,719; repairs of its steamers, $426,472.70; officers' expenses in New York, with salaries, $105,003.10; all other agencies, $364,376.84; Benicia depot, $21,622.26; dividends—one of five per cent on $15,000,000, and three of three per cent on $20,000,000—$2,550,000, making its disbursements $7,546,193.90, leaving cash in hand to the amount of $93,514.09.

The number of voyages between New York and San Francisco was 36 each way. The number of through passengers out was 18,477; to New York, 8,383; way passengers, 4,246; total, 31,106. Of 46,428 tons of freight, 29,716 was for San Francisco, 16,712 for New York, and 16,164 tons was for way ports, making a total of 60,000 tons carried on this line. Added to these was treasure of the value of $42,291,919 These figures represented only the business and expenditures of the New York and San Francisco lines. Louis McLane, the acting president, remarked that he preferred that the president, Allan McLane, should report on the China line, as he would do on his return from Yokohama, but that more than $4,000,000 had been expended in steamers and depots for this line, and $1,500,000 more would be required to complete the fourth steamship, while the receipts from passengers, freights, and mails were in excess of current expenses. The assets of the company were given as cash, bonds, Panamá railway shares, and Atlantic telegraph stock, costing $3,778,-124.20; and loans on collateral, including $500,000, secured by bond and mortgage covering all the real estate and other property of the Novelty Iron Works company, and guaranteed by James Brown which amounted to $1,230.790; bills receivable, $302,556.84, together with coal, shares of the company's stock,

supplies, real estate, warehouses, officers, with twenty steamers, two tugboats, four unfinished steamers which were partly paid for, etc., to the amount of $22,472,-684.72. The liabilities of the company were to Brown, Shipley & Co., for $473,708.18 credits for coals and supplies, for freight on coals, and for unfinished steamers. The company's steamships ranked A1, those on the Panamá route having an average capacity of 1,000 tons through freight and 1,000 passengers, while those of the China line had capacity for 1,500 passengers and 2,000 tons of freight.

Such a report would not indicate any weakness in the great company. Yet it was at this time being most violently assailed by an opposition within itself, as well as having to stand the competition of the North American company on the seas. In an address of a part of the stockholders to the other members of the company, made in November 1867, charges of fraud, extravagance, immense salaries, and enormous expenses were put forward as a reason for desiring to make a change in the directory at the coming election. The protestants were Frederick Butterfield, Spencer K. Green, George B. Hartson, and O. W. Joslyn & Co., directors of the North Atlantic Mail company. They began their remonstrance by stating that the commerce of the company on the Pacific ocean the previous year amounted to $100,294,687, and the value of the tonnage employed in that trade to $92,874,250. Comparing these figures with those of other nations, they found that British trade for the same period was $139,184,834, and the value of the tonnage employed $51,464,750, while the French commerce was $67,-210,609, and the value of the French ships was $8,130,750. The total value of the trade of the whole world, which ought to pass from the Atlantic to the Pacific, was $467,831,130 annually. The trade which was secured by the Pacific Mail, and the value of its ships, was therefore something surprising and magnificent, and should not be imperilled. They declared

that in spite of the fact that the net profits of the company were nearly $4,000,000 annually, that dividends had been reduced in 1867 from twenty to twelve per cent, or a total of $2,076,000. They charged that the managers had recently sold 50,000 shares of stock to one or more directors for $200 a share, when the price was $220 and $230, and afterward took back a portion of it at $150 when the market price was $125. They also charged that salaries of freight clerks had been raised, and that to Louis McLane, president of Wells, Fargo & Co., was paid a commission of five per cent in gold on all freights earned by the company. They declared that a large number of influential stockholders believed the present management injudicious and extravagant; that it was not necessary to increase a fund which must already exceed $8,000,000, and that twenty per cent dividends should be restored; that it was improvident to pay Wells, Fargo & Co. five per cent on all freights carried by the company; and unnecessary to pay a brokerage on coal freights amounting to $70,000 annually, when the company's clerks could procure the charters, or if competition were allowed, brokerage need not cost more than $5,000; that it was extravagant to pay the president $25,000 salary a year, to allow half a million for office expenses, and to pay $20,000 annually to Brown Brothers & Co. for a building in New York which was not needed. The offices in Wall street, said these irate critics, were not kept for the convenience of the stockholders, since they are not allowed to examine the book of names except by an order of the court.

All this and much more revealed valid reasons for discontent, although in the reply of the directors, Francis Skidder, Louis McLane, William Denniston, James M. Brown, Moses H. Grinnell, and Jonathan Thorne, most of these accusations were sought to be denied. They asserted that the policy of the board was to avoid all speculation in the stock of the com-

pany, and to manage its affairs for the permanent good of the stockholders; that the only monopoly the company had, or could have, was that which arose from their superior manner of doing business, and the confidence of the public inspired by their management. Their reason for increasing the capital of the company, which they had long ago commenced to do, was to have the means on hand to hold out against speculative competition, and in order to establish a line upon the Atlantic, the good results of which had been evident. The importance of a line to China, and the necessity for superior vessels to comply with the requirements of the post-office department with other great outlays, and a threatened foreign competition, made a large reserve fund indispensable. There had been, also, apprehensions that the Panamá Railway company might fail to obtain a further concession for the transit of the Isthmus, and the necessity that the steamship company should have on hand cash to secure the concession, constituted another reason for lessening dividends. They denied that a large cash fund was made in order that it might be kept on deposit with friends of the company, or that it kept its balances with any private bankers or individual.

As to side-wheel steamers, which the opposition considered extravagant as compared with screw propellers, the experience of the company was declared to be that paddle-wheel vessels, for its trade, possessed decided advantages. "Indeed," said the directors, "there are to-day no vessels in the world which perform the same service upon so small a consumption of fuel as the vessels we have constructed. The service which in 1860 was performed by vessels consuming eighty tons of coal a day is now better done on a consumption of forty tons a day; and when the high price of coal on the Pacific is considered, it will be seen how largely the company's profits result from the superior qualities of the vessels we have constructed." The charge of unnecessary ship brokerage

was denied; but that the president of the company received $15,000 salary, and one-half per cent commission on dividends, was acknowledged, and defended on the ground that the services of so competent a president as McLane were worth the money, and to put in his place an inferior man would not be true economy.

And here followed some statistics, to the effect that during the twelve and a half years prior to McLane's appointment the company divided to its stockholders $5,141,510 in money and $1,600,000 in stock, being an average of $539,322 per year; while during the seven years since his appointment it had divided $8,374,595 in money and $7,500,000 in stock, or an average of $2,267,800 per year.

It would seem that the position which was taken by the defendants was unanswerable; but the entanglements into which the Pacific Mail had been forced by the Vanderbilt opposition just previous to McLane's appointment, by which the companies had interchanged stock and property, were now the forces by which the Pacific Mail was sought to be rent asunder. Every effort was put forth to prevent the reëlection of McLane at the annual election held in November. Injunction followed injunction. First the directory of the Pacific Mail procured the issuance of a writ from the United States district court, restraining several large stockholders from voting unless the English firm of Brown Brothers had the privilege of voting on all restricted stock. Another injunction from the same source restrained Brown Brothers from voting on any other stock than that of the Atlantic Mail company. A third writ from the supreme court directed the inspectors to postpone the election until the 16th of December, to give time for the settlement of the various questions in dispute.

All this restraint came from an effort to prevent Brown Brothers & Co., who held in various interests 77,839 shares of the company on which they alone

were authorized to vote. As the whole capital stock consisted of 200,000 shares, it was plain that Brown Brothers & Co. might control the choice of a directory, or their exclusion give an entirely different coloring to the result. The court decided that the stock held by Brown Brothers & Co. must be voted, and finally before election day a compromise was effected, the Atlantic Mail interest being allowed a fair representation in the board to be elected. During the flurry, and owing to the effort of certain persons to gain the control, Pacific Mail stock was subjected to a downward pressure, but rebounded on the settlement of the difficulty.

The interval before election was employed by the opposition in canvassing. Oliver Charlick, Thomas F. Mason, and H. S. Camblos were appointed by the malcontents a committee to nominate a board to be voted for on December 16th. The names offered by this committee were Charles H. Russell, Edwin D. Morgan, Abiel A. Low, Moses Taylor, Moses H. Grinnell, Samuel G. Wheeler, Jr, Oliver Charlick, George B. Hartson, and Allan McLane. The directors of the Atlantic Mail company subsequently named, Allan McLane, Howard Potter, James M. Brown, Louis McLane, Jonathan Thorne, William Dennistoun, Abiel A. Low, George B. Hartson, and Samuel G. Wheeler as their choice for directors of the Pacific Mail company.

Allan McLane was reëlected president at the final election, and continued in that office until 1872. The period of his presidency, extending over more than seventeen years, was that of the greatest growth and most interesting history in steam navigation on the Pacific, and without question much of the greatness of the company was due to the wisdom of his management. In his report, in February 1868, he gave a backward glance to his first report, made in 1861, when the company owned eleven steamships, and was building the *Constitution*. Of the eleven steamers,

whose names are by this time familiar to the reader, the *Golden Age* and the tugboat *Taboga*, employed in Panamá bay, alone remained in active service. The *Golden Gate* had been burned at sea; the *Oregon*, *John L. Stephens*, *Orizaba*, and *Uncle Sam* had been sold as unfitted for the trade, but to friends, in whose hands they served as feeders to the main line; the *Sonora* and *Washington* were worn out, and had been broken up; the *California* was soon to be broken up; and the *St Louis* was kept as a spare ship at Panamá He showed that notwithstanding the rapid deterioration of steamship property, the gross receipts and profits of the company constantly improved. In 1861 the receipts were $2,792,489.97; in 1865, $4,013,008.42; and in 1867, $7,151,352.69. The total net earnings of the seven previous years had been $14,935,988.99, of which $8,374,595 had been divided among the stockholders, and the remainder applied to the construction of a fleet of the finest steamships in the world. The company owned at this time twenty-two steamers, namely: *Rising Star*, *Arizona*, *Henry Chauncey*, *Ocean Queen*, *Northern Light*, *Ariel*, *Clary*, *Clarita*, *Montana*, *Golden City*, *Sacramento*, *Constitution*, *Golden Age*, *St Louis*, *Sonora*, *California*, *Taboga*, *Great Republic*, *China*, *Colorado*, *New York*, *Costa Rica*, and *Hermann*, and had in process of construction the *Japan*, *America*, *Alaska*, and Panamá tender *Ancon*.

The transportation business in the Pacific had now reached enormous proportions. The passenger traffic from 1858, when it may be considered as settled, down to 1865 inclusive, was as follows:

ARRIVALS.		ARRIVALS.	
YEARS.	PASSENGERS.	YEARS.	PASSENGERS.
1858	12,746	1862	14,771
1859	13,402	1863	15,882
1860	16,185	1864	9,773
1861	16,864	1865	25,784

The departures for 1865 exceeded the arrivals, numbering 29,776, this being the first year in eight when the state had not gained in population by excess of arrivals over departures by sea. The following year the balance was restored. For many years the British government had enjoyed a monopoly of the carrying trade between Europe and the far east. First in the slow-going, square-rigged Indiamen which made a voyage via the Cape of Good Hope in three years time. Then came the Peninsular and Oriental Steam Navigation company, which was subsidized by the British government. In 1858 this was the most powerful maritime company in the world, and dictated terms alike to the government and its patrons. But its ships were inconvenient, slow, and badly managed, and they navigated seas where the mercury rose to 110° daily. It became in time as far behind the age as the Indiamen had been behind the clipper ships which in California's young days divided the trade of China with the French steamers, and still competed with Pacific steam lines. When the exigencies of trade had outrun the British contract line, the French seized upon the project which England disregarded, of the Suez canal, and thus placed the Isthmus transit out of the control of the British government by subsidizing the Messageries Imperiales steamers, giving a monthly line to China, and securing a water transit between the Mediterranean and Red seas. Its passengers gained ten or twelve days' time, cheaper rates, and greater comfort and courtesy. The next concession to the growing demands of commerce was the American China line, which astonished the merchants of Shanghai on the 5th of August 1857 by delivering New York and London market reports of July 5th. The Pacific Mail company carried letters from Hongkong to New York in forty-four days, and to London in fifty-five, while telegrams from London were delivered within thirty days in Japan. Previous to the establishment of this line, the only steam communica-

tion with China for the American traveller was by the way of Europe, India, and Hongkong. Now the current of travel was to be reversed; and when the transcontinental railroad should be completed, European travel would flow over this continent and across the Pacific, thus affording favorable opportunities for sightseeing, with every comfort of travel, in a latitude where the mercury never rose to an unpleasant degree. The English afterward bethought themselves to put on steamers to India via the Suez canal, but they could not compete with railroads.

Notwithstanding these advantages in its favor, the China Mail had not an easy victory at first. The Hongkong press visited heavily upon it the sins of its California stiff-necked arrogance, and warned it that the merchants of China were not the patient, easily pleased, forbearing kind of men who lacked the energy and courage to withstand imposition and defend themselve as the Californians had shown themselves to be. "On or about these days a steamer will sail" would not suit the people who believed that time is money. It criticised severely the employing of "dirty coolies," who had, perhaps, never before seen a knife and fork, to wait on the table; and the necessity of making acquaintance with the head steward in order to obtain any desired luxury that was afforded by the commissary department.

There were, however, really great obstacles to be overcome. Having no coaling station on the route, and having to carry coals for the voyage, nearly half the freight carrying capacity was taken up by fuel, in order to save which a low rate of speed was maintained. It was not always possible to discharge cargoes in time to start promptly, and the storms of these seas frequently interfered with regular sailing days. It required more than two years to become thoroughly established.

By the aid of the congressional subsidy the company was able to keep the field, although sustaining a

loss of $9,000,000 before it began to realize a profit. Then it asked to have the service increased and the subsidy doubled. There were ten outward and nine inward voyages made in 1868; 10,094 passengers carried, 698 of whom were first class; and treasure shipped to the amount of $6,743,672. The export trade amounted to $8,152,752, and in 1869 to $10,816,018. The imports for the same periods increased from $2,332,347 to $3,998,026. The duties on Asiatic goods increased from $1,738,151 to $2,044,929. Nearly half of this trade was done at San Francisco. The mails, too, had increased five fold. Congress passed a law in 1870 permitting bonded goods to be shipped from San Francisco, by rail to New York and certain way ports, and the right was also granted to transmit merchandise from Great Britain across the continent and tranship on steamers without breaking packages.

There had been a great gradual decline in the market value of Pacific Mail stock from 1865 to 1870, resulting from the efforts of railroad men to gain control of the Pacific Mail, based upon reports of losses and irregularities, as well as from causes already mentioned.

The opening of the Central Pacific and Union Pacific railroads in 1869 was the occasion of a new crisis in its affairs. Hitherto it had been forced to contend only with rivals of its own kind, and which were dependent like itself on the Isthmus transit. But now all was changed. The current of travel and of business was overland, by a mode of swifter travel than steamships going thousands of miles out of the line of their ultimate destination ever could achieve. Competition was out of the question; it was only by combination that the usefulness and the dignity of the old Panamá line could be preserved. But it was some time before that combination could be satisfactorily effected. During the scramble between longs and shorts to profit by the vexations of the Pacific Mail company, $3,000,000 might have purchased a

controlling interest in its stock, while its assets were valued at $18,252,797. From the opening of the transcontinental road the receipts of the Panamá line declined rapidly until the latter part of 1870, and in 1871 were declared barely sufficient to cover running expenses. To meet this loss special efforts were made to divert shipments from sailing vessels, especially from those going to England and Europe.

Still, it was more by comparison with former times that the company suffered than in point of fact. "Our folks," said one of the company's agents, "were so used in former years to taking in money by the shovelful that they look ugly about getting it, as at present, in the palm of the hand. They are not ruined, only half contented. The way traffic from Panamá north is very good, and picking up. The China trade is large and growing, and the British Peninsular and Oriental line is mightily distressed."

In 1869–70 the company sent Richard B. Irwin, one of its California agents, to Washington to propose to the government a doubled service and a doubled subsidy on the China line; but the application failed. Had it succeeded, the company intended to put on a line to Australia, to prevent this trade falling into the hands of an English company. But the English company failed also of a subsidy, and no line to Australia was established at that time.

The nearest route available between Australia and England was that via Point de Galle, the Red sea, the Mediterranean, and thence across Europe. To have their mails thus transported monthly the sum of $2,250,000 was paid to the Peninsular and Oriental company. In addition the company charged one-half of one per cent freight on all the gold carried. First-class passengers paid $650, and none second class were allowed. Equally high rates were charged for books, papers, and any light freight. The contract time for the voyage each way was fifty-four days, and the

actual time fifty-six days. One-half the subsidy was paid by the Australians, and the other half by Great Britain. It was estimated that 30,000 first-class passengers travelled each way annually, although to avoid the discomforts of the Red sea route many preferred the passage around Cape Horn in clipper ships; but at the lowest estimate these passengers paid out annually for being carried back and forth $15,000,000. The superiority of the route by way of San Francisco and the Pacific railroads to New York, and thence to Liverpool by one of the Atlantic lines, was manifest, besides which the cost would be very much less than by the old routes via the Red sea or around Cape Horn.

Commerce with Australia had long been desired by California. In 1854 the project of steam communication had been broached; but the nearest approach to intercourse had been by the opening of a line to Panamá by the Australian and New Zealand Steamship company in 1866, which connected there with the Royal Mail for Liverpool, as did also the Pacific Mail, whose San Francisco agent was also agent for these companies. It was thought to be apparent in 1868 that the Australian company was contemplating a change of route to San Francisco, which fear acted as a spur to American effort to retain the sovereignty of the seas in the Pacific.

But it was well known that no steamship line could sustain itself without government aid. Accordingly, in March 1870, and again in December of the same year, the San Francisco chamber of commerce memorialized congress on the subject, as did the state legislative body also, the United States senate committee reporting favorably on the advantages of Australian commerce with our Pacific coast. The merchants of Fiji, who were deeply interested in the movement, sent a memorial by the hands of Henry C. Victor, then on a visit to the Islands, to W. H. Webb, known to be contemplating attempting such an enterprise,

to encourage him to undertake it. They at the same time urged the government to take possession of the Islands, on which it had an indemnity claim for the murder and cannibalistic consumption of an American missionary, and which they represented to be fertile, and adapted to coffee and sugar planting. That this advice was neglected, and that the English paid the indemnity and took the island of Vita Leuu instead is now a matter of history. The long ocean voyage made it a matter of interest to decide upon some central point of meeting and coaling in mid-ocean, and the Fiji islands were regarded by the residents as a convenient point in the course of any future steam line to New Zealand and Australia.

The press of the United States, especially of California, was very urgent in 1870 that congress should subsidize an American steamship line to Australia. Reports were flying about that a London company was intending establishing a line from Australia via San Francisco, thence by rail to Portland, Maine, and thence by steamer to Milford Haven, Wales, and to make the trip in forty days; also that the Cunard line would transfer some of its vessels to the Pacific for the purpose of securing this trade. Amidst all this talk Holladay and Brenham of San Francisco, and W. H. Webb of New York, were the first real competitors for the line. The former proposed to send their Honolulu steamers through to Sydney, or to connect with a line from Sydney. Webb had already made arrangements with the governments of New South Wales, New Zealand, and Queensland, which had pledged to pay a certain amount of subsidy. The government at Melbourne held aloof, fearing to injure her position as the entrepôt of intercolonial trade; but the chief difficulty was with the United States government. Webb was well provided with steamers, the *Nebraska*, *Nevada*, *Dakota*, and *Santiago de Cuba* being available for this service.

In the mean time H. H. Hall, United States consul

at Sydney, chartered two steamers, the *Wonga-Wonga* and the *City of Adelaide*, of the old Australian and New Zealand company, obtained a mail subsidy of $75,000 each from the governments of Australia and one of the colonies, and commenced in March 1870 to run from Sydney to Honolulu connecting with Holladay's steamers to San Francisco. The *Wonga-Wonga* brought out 160 passengers, and reached Honolulu in seventeen days, transferring 140 of her passengers to the *Idaho*. The whole passage to San Francisco, including stoppages, occupied thirty-nine days, the distance being 7,284 miles, or 500 to 900 miles less than to Panamá. First-class fare was $175, second-class, $125, and third-class, $90. The government of New Zealand addressed a congratulatory letter to the governor of California, and sent with it public records showing the condition, and the products of the colony. Letters from England by this line reached Auckland nine days sooner than letters of the same date via Suez.

In February 1871, Julius Vogel, treasurer and postmaster-general of New Zealand, arrived in San Francisco, and made a speach to the chamber of commerce, explaining that New Zealand had always held that the mail line should be an American one, but that Victoria gave the preference to a route via Suez and Galle, or the Cape of Good Hope. The cost of the line via Panamá had been shared between New Zealand and New South Wales, but was then contributing to the Galle line. In 1869 a proposal was made to the government of New Zealand by Queensland and New South Wales to establish a line by the way of Torres straits and Suez independent of the line by way of Melbourne and Galle, but the general assembly by resolution had decided in favor of San Francisco, and it was in consequence of this resolution that Mr Hall had acted as he had in starting the line to Honolulu in the expectation of developing trade and encouraging a better line.

Not long after the appearance of Mr Vogel, who proceeded to Washington from San Francisco, a contract with Webb and Holladay was signed March 7th by which thirteen trips a year were to be made between San Francisco, New Zealand, Sydney, and Melbourne, and the time to be made was such that the mails could be delivered in London in forty-eight days. On the part of New Zealand $300,000 was promised, and on the part of the United States a similar sum was expected.

On the 8th of April, in spite of the fact that congress had adjourned without passing appropriation bills in aid of either the Australian line or increased service to China, Webb despatched the *Nevada* for the ports of Honolulu, Auckland, Wellington, Lyttleton, Port Chalmers, Sydney, and Melbourne. At the end of about a year and a half the steamers were withdrawn, with the declaration by their owner that his loss was $500,000, and that no steamship line could exist without revenue from passengers, freights, and mails. He should have known the truth of this matter, for his line to Germany had failed when the German companies combined to refuse to sell tickets by American lines; his line to Copenhagen and other ports in the Baltic failed when the British owners combined to run off American vessels.

The successor of Webb's line was the California New Zealand and Australian Steamship company's line of which the energetic American consul at Sydney was the founder, aided by English owners in London. Vessels were chartered with which to commence business, but it was the intention of the company, which despatched its first steamer in December 1873, to construct several ships expressly for this line. Burnside and Thomas A. Scott were said to be the American representatives of the company. The agent in San Francisco was J. C. Merrill.

About this time it began to be realized by the California merchants that the great company had neg-

lected an opportunity of largely augmenting American commerce by having left to an English association, the Pacific Steam Navigation company, the whole of the west coast of South America. This company, rebelling against the extortionate tolls demanded by the Panamá railway company, had also started a line through the straits of Magellan. What with the falling off in business on the opening of the transcontinental railroad, and the loss by the Magellan line, the Panamá railroad for a period of nearly two years made little over its working expenses. And yet, properly managed, it was the best piece of railroad property, of equal extent, in the world. About 1871 it was forced to reduce tariff, and to enter into a contract with the Pacific Mail by which lower through rates were granted. The independence of the Central Pacific railway company was quite equal to that formerly practised by the Pacific Mail company. The latter at first refused to ship freights from China ports unless the routes specified should be via Panamá. The railroad company thereupon threatened to put on a steamship line to China should it not be permitted to carry all east-bound passengers and freight coming to San Francisco by the Pacific Mail. The demand was granted. It could not be otherwise than that the railroad should profit greatly by the China line; and inversely the steamship business was greatly augmented by the trade which the railroad fostered.

In April 1872, having in mind the significance of these several matters, and fearful of losing advantages already gained, the San Francisco chamber of commerce held a special meeting for the purpose of memorializing congress to pass the bill then before it granting a subsidy to the Australian line, and the other bill increasing the service and the subsidy of the China line. As I have already mentioned the Australian bill failed; but in June the China subsidy bill became a law.

By the terms of this act, which empowered the post-

master-general to make the contract with the company, the service was to be made semi-monthly, and to be performed in American-built, iron-screw steamships of not less than 4,000 tons register, commencing on the 1st of October 1873. The time arrived, but the ships were not completed, owing to the impossibility of obtaining the necessary amount of material of the weight and size required, which had never been manufactured in America, and it was anxiously feared that the contract with the government would be declared forfeited. The company, however, commenced its semi-monthly trips to China with the *Alaska, China, Colorado, Japan, Great Republic*, and *Colima*, the *Alaska* and *Japan* having the contract tonnage, but the others, ranging from 3,000 to 3,882 tons, and constituting a noble fleet of vessels. In March 1874 the *City of Peking*, the largest steamship in the world except the *Great Eastern*, was launched from the shipyard of John Roach, at Chester, Pennsylvania, followed soon after by the *City of Tokio*, of equal size.

The dimensions of these vessels were: length over all, 420 feet; beam, 47 feet 4 inches; depth, 38 feet 6 inches; tonnage, nearly 6,000; full ship, rigged with four masts, with accommodations for 120 first-class, 250 second-class, and 1,000 third-class passengers. The staterooms in the first cabin were 6 by 8½ feet; the grand saloon 120 by 48 feet; the social hall 41 by 19 feet 8 inches. The saloon was finished in maple, satinwood, and French walnut, and upholstered in plush, with velvet carpets. The engines were double compound, high-pressure cylinders, 51 inches in diameter; low-pressure cylinders, 88 inches in diameter; stroke of piston, 54 inches, with propeller wheel of Hirsch's patent, 20 feet 3 inches in diameter, pitch 30 feet. The boilers were 10 in number, 10 feet 6 inches long, and 13 feet in diameter. Such were the ships evolved by degrees from the fleet of 1849, whose largest vessel was, although large for the time,

scarcely more than a third the size of the China steamers, whose cost each was about $1,000,000, the amount of one year's increased subsidy.

When these matters were projected, Allan McLane was still president of the Pacific Mail, but at the annual election for 1872 Alden B. Stockwell, James D. Smith, H. H. Baxter, Frederick Billings, Alexander Masterton, Henry Clews, George L. Kingsland, R. G. Ralston, and F. W. G. Bellows were the board chosen in the interest of the now dominant stock-gambling opposition.

When McLane retired and Stockwell became the president, the Pacific Mail company owned twenty steamships, valued at $11,843,534 60, and other property, including 14,000 shares in the Panamá railroad, amounting to a total of $21,197,152.70. The Panamá railroad company, whose directors were W. H. Aspinwall, David Hoadley, Francis Skiddy, H. H. Baxter, Henry Clews, J. D. Smith, Alexander Masterton, Frederick Billings, F. W. G. Bellows, L. S. Stockwell, A. B. Stockwell, G. L. Kingsland, and G. Parmly, all but five of whom were directors in the Pacific Mail, showing that the speculators had obtained control of both companies, gave its cash assets at $295,000, its real estate at $73,000, and the value of five steamers which it owned, and ran in opposition to the Pacific Mail, at $900,000, or a total of $1,268,-000. During Stockwell's presidency the number of the Pacific Mail's vessels was increased to forty-one by the addition by purchase of the Central American and Mexico line, consisting of six steamers which had competed with the Pacific Mail company for the coast trade north of Panamá; of seven vessels on the Atlantic, and four on the Pacific, which had formerly run in opposition; and by construction and charter of the remainder.

The Pacific Mail company had now control of the sea from San Francisco to Panamá and New York, except as to Holladay's coasting steamers. It also

ran a line to the Sandwich islands, in place of Webb and Holladay's steamers, withdrawn. In August 1873 the Colorado Navigation company was formed, which purchased the propeller *Montana*, together with that portion of the Mexican route of the Pacific Mail company embraced in the peninsula and gulf of California. The Colorado company placed the *Montana* and the *Newbern* on the route to San Francisco, calling at Guaymas every twenty days.

Notwithstanding the great increase in capacity, aggregating 91,864 tons, the assets of the company in 1873 were given in at $20,542,845. The company sustained an unusual amount of losses this year, which will be noticed specially further on. The line to the Hawaiian islands was withdrawn in September. In the following month an English association, the Trans-Pacific Steam Navigation company, established a line to China via Japan, sending out the *Vasco de Gama*, the first of their fleet, on the 20th of November, to be followed soon by the *Vancouver*. At the same time the *Prince Alfred* ran regularly between Victoria and San Francisco, alternating with the *Labouchere*.

The next presidents of the Pacific Mail company after Stockwell were G. H. Bradbury, then Russell Sage, Sidney Dillon, W. P. Clyde, Henry Hart, D. S. Babcock, and John Riley. Sage served without salary, and Rufus Hatch was manager, and who it was expected would infuse new life into the affairs of the company. There were eight new steamers in the service or being constructed, namely, the *Acapulco*, *Granada*, *Colima*, and *Colon*, of 3,000 tons and over; while the *City of Peking*, *City of Tokio*—first called *Yeddo*—already described, and the *City of Panamá* and *City of Callao*, of 1,700 tons each, were not yet completed.

Mr Hatch, in December 1873, announced the intention of the company to run the China steamships again direct to Panamá, only stopping long enough to discharge San Francisco freight, declaring that the

new arrangement would materially lessen freights and fares from China to New York. Passenger rates were to be reduced from $125 to $100, and from $100 to $90. Officers' salaries were reduced; subsidies paid out were discontinued—as in the case of the *William Tabor* which received $33,000 yearly not to run to San Diego in opposition to the Pacific Mail steamers in the coasting trade, namely the *Orizaba*, *Senator*, *Pacific*, and *Gypsy*, and great things were prophesied of the new management. Already five of the costly new steamers had been paid for, two others half paid for, and only one on whose construction nothing had been paid.

We all know how it often fares with the best laid schemes. The determination of the new directory to carry the company's passengers and freight to Panamá engendered the Oriental and Occidental Steamship company of California, established by the representatives of the Central Pacific railroad; the directors being Leland Stanford, Charles Crocker, David D. Colton, Lloyd Tevis, and Mark Hopkins, and the capital stock $10,000,000, in shares of $100 each. The "selfish policy of the steamship company" was alleged as the cause of the Central Pacific's action in setting up an opposition, and, having entered into it, the new company intended to compete for the trade of the Pacific ocean. The average speed of the Pacific Mail's China steamers was 30 days and 16 hours from Hongkong to San Francisco; 20 days, 17 hours and 48 minutes from Yokohama, although the *Peking* had made the voyage in 16 days and 13 hours from Japan. The Occidental and Oriental steamers took 27 days, 12 hours from Hongkong; and 17 days, 10 hours from Yokohama; but the *Oceanic* had made a trip from China in 24 days, and from Japan in 15 days, 21 hours. The average from Sydney was 26 days, 16 hours, 55 minutes.

San Francisco had rebelled at the notion of being made a way port, and was at first disposed to scold

and then to coax its old tyrant into reason. They claimed that a selfish policy might be justly charged upon any person or corporation. The railroad demanded the patronage of the steamship company's business, of course, not in the interest of California, but in its own interest. The steamship company not only was opposed to this exercise of powers on the part of the Pacific railroad, but it was hampered with the yoke of the Panamá railroad, which had some rights in the company. It had other troubles, of which the threatened loss of the $500,000 increase of subsidy was not the slightest. In addition to the doubt thrown upon the integrity and validity of the contract by the failure to provide iron steamships of a certain capacity at the outset, there was hanging over congress an investigation of a charge that agents of the Pacific Mail had paid $900,000 in money as a bribe to members and others to secure the passage of the additional subsidy. The investigation proved nothing except that such a sum of money had been disbursed by the company for some purpose, and that it came very near a California senator. The investigating committee finally turned the matter over to the courts, where the case disappeared.

Down to the date of the organization of the Oriental and Occidental Steamship company, in November 1874, notwithstanding its heavy expenditures, the Pacific Mail company continued to report favorably upon its condition. Its passenger receipts from New York to San Francisco, one way, from January to August for the years 1873 and 1874, were $1,832 619, notwithstanding the Pacific railroad, and in addition to the China trade. The railroad people understood very well that they could not compete successfully with the Pacific Mail, but by combining with it on the ocean they could share in its prosperity, and force its coöperation. A month after the new company was formed a contract was entered into with the Pacific Mail by which that company should perform only a

monthly service to China, and the Occidental and Oriental a like service, making a semi-monthly line. The steamers of the latter line were the *Gealic*, *Oceanic* and *Belgic*. All the steamers were to retain connection with the Pacific railroads, and the roads would divide the earnings of the through business from China to the United States equally with the Pacific Mail. The railroad company also guaranteed 600 tons of freight semi-monthly to the Panamá line, and five dollars head money on all passengers carried by that company.

The Pacific Mail steamers thus released from the China service were to be placed on the Australian route to ply monthly between Sydney and San Francisco; and a contract to that effect was entered into with the colonial governments in June 1875, under a guarantee of $450,000 annually. This contract forced out of the transportation business the line then running under the name of California, New Zealand, and Australia Steamship company. The subsidies enjoyed at this time by the Pacific Mail were $600,000 from the United States, $450,000 from Australia, $16,000 from Costa Rica, $12,000 from Nicaragua, $12,000 from Honduras, $15,000 from San Salvador, $25,000 from Guatemala, $30,000 from Mexico, or $1,160,000 for carrying mails. The double subsidy to China was withdrawn after the investigation referred to, or it would have been nearly $2,000,000. Previous to this the company had bought off the rival line to China, comprising the two steamers *Vasco de Gama* and *Vancouver*, and subsequently, to put them to some use, entered into a contract with British Columbia to carry the mails to Victoria and other ports tri-monthly in summer, and semi-monthly in winter.

So far the company had purchased, wisely or unwisely, a large number of steamers, but in January 1875 it transferred its San Diego line, consisting of the *Senator*, *Mohongo*, *Orizaba*, *Pacific*, *California* and *Gypsy*, to the firm of Goodall, Nelson & Perkins of

San Francisco, under the name of Pacific Coast Steamship company, with the good will and exclusive right for twenty-five years, against themselves, of all the coast trade between San Francisco and San Diego, for $230,000. The purchasing parties agreed not to run their vessels on any of the routes then in use by the Pacific Mail; also not to sell any of the steamers purchased for twenty-five years, except upon the condition that they were to observe the same terms; and for every breach of this part of the contract $10,000 should be paid, and the damaged company should have the right to apply for legal redress.

And still the great steamship company was in trouble. Its arrangement with the Pacific railroad was not satisfactory to either party. In 1876, when Clyde was president of the Pacific Mail, a contract was entered into between the company and the railroad by which it was agreed that the steamships were to decline all light freight by demanding high rates, and should they not be filled within six hundred tons of their capacity the Union Pacific should make up the deficiency. This the Union Pacific did by filling the vessels with heavy freight at low figures, retaining all the light and valuable freight for itself. The Pacific Mail was to keep up a high passenger rate for the railroads by charging a high fare on the steamers, and receive head money. But the steamship company had no means of knowing that the payments made were correct, and this arrangement ceased in the latter part of 1877, the railroad being then $40,000 in debt to the steamship company.

But this was not all. In 1875, while under the management of Jay Gould, the Pacific Mail had a falling out with the Panamá railroad, then managed by Trenor W. Park, who cancelled the existing contract, and refused to grant bills of lading or passage tickets between New York and San Francisco. His next step was to wrest the control of the Pacific Mail from Gould, and place it with his favorites, with W.

P. Clyde as president. A new company called the Panamá Transit Steamship company came into existence, with Clyde as president of this also, with a fleet of old men-of-war vessels which had been refitted, among them the *Crescent City*, *Carolina*, and *Georgia*, and this company was to take the place of the Pacific Mail Steamship company. Park's next move was to issue a circular to the effect that in case the Pacific Mail should elect a board of directors not identified with any competing line, the Panamá Railroad company would adjust its claims on the steamship company amounting to about $400,000, and extend the time of payment so as to prevent a sacrifice of property, securing itself on the company's steamers; and would, with the consent of the Panamá Transit company, give the Pacific Mail favorable terms for transportation of passengers and freight over its road. The two steamship companies should also contract to operate in harmony.

These complications led to an extraordinary transaction. In 1878 the Pacific Mail purchased the fleet of the Panamá Transit company for $1,350,000, paying for it $1,000,000 in borrowed bonds of the railroad company, and the remainder in notes of the Pacific Mail company. To secure the railroad company it transferred not only the four vessels just purchased, but its whole fleet of iron steamships, which had recently cost $8,000,000.

To pay its indebtedness, amounting to over $2,000,000, out of its earnings, was now the problem for the directory to solve, with its shares selling at 13½. The contract with the transcontinental railroad being at an end, and $300,000 of the contract money being unpaid, the Pacific Mail issued a circular that freight would be taken by the steamship company at the old rate of five dollars per hundred pounds, and the Union Pacific having advanced its rates one hundred per cent, the steamers filled up rapidly. When the railroad again sought to control fares and freights, the

Pacific Mail demanded a royalty of $55,000 monthly, which was only a little over half what the Panamá railroad exacted monthly from the steamship company, the latter being, by the year, within $300,000 of its earnings. The gross earnings of the Panamá railroad in 1878 were given at $2,114,859, to which was added a subsidy of $250,000 from the Colombian government. Its net profit was $1,079,626. Its bonded indebtedness was $3,989,000, on which it paid seven per cent interest annually.

In 1879 a steamer was lost which, being mortgaged to the railroad company, added to the liabilities of the Pacific Mail, did not increase the hopefulness of its prospect. However, an amended contract with the Panamá railroad company, by which its charges were subsequently reduced $10,000 a month on the freight contract, and the indebtedness correspondingly reduced, gave the first indication of a recovery from its embarrassments. Its liabilities over assets were still $1,550,578, but in 1880 the destruction threatened by the mismanagement, and the increasing power of railroad companies, was averted by a recovery of its business on the procurement of better terms with the Panamá company, and active competition with the Central Pacific. The latter ended by a compromise by which C. P. Huntington, of the Central Pacific and Occidental and Oriental companies, obtained, through the purchase of certain Pacific Mail property and his relations to its president, Jay Gould, and to the Union Pacific, control of the management of the China line. The directors in 1880 were Jay Gould, Trenor W. Park, Sidney Dillon, Russell Sage, C. P. Huntington, Charles G. Franklin, E. H. Perkins, Jr, George Hoyt, and J. B. Houston. The total earnings for the year ending in April 1880 were $3,586,442.58, and the net earnings over half a million.

In 1881 the Panamá railroad was sold to the Panamá canal company for about $20,000,000, since which time affairs have proceeded with less apparent

friction. A number of new vessels have been added to the fleet of China steamers, namely, the *City of New York*, *City of Sydney*, *City of Rio de Janeiro;* to the Panamá line the *San Juan*, *San José;* and to the Occidental and Oriental line the *San Pablo*. In 1882 the Oceanic Steamship company was incorporated, of which John D. Spreckels and brothers are the general agents, and which runs between San Francisco, Auckland, and Sydney, making semi-monthly trips. Its vessels are the fine steamers, *Arabic*, *Australia*, *Zealandia*, *Mariposa*, and *Alameda*. The amount of subsidy received by the Oceanic company amounted to less than $200,000, of which the United States paid only about $20,000, the remainder being paid by the governments of New Zealand and New South Wales. This contract expired in November 1888, when congress assumed a more just proportion of the compensation due for carrying mails.

Of coast lines the California and Oregon steamers owned by Holladay fell into the hands of the Northern Pacific Railroad company, in 1881, and a new organization was effected under the name of the Oregon Railway and Navigation company, of which Villard was first manager, and which owned both ocean and river steamers and railroads. The steamers in use on the Oregon line after the old Pacific Mail ships were withdrawn were several small propellers, namely, the *Oriflamme*, *George W. Elder*, *City of Chester*, *Ajax*, and *Montana*. These gave place about 1880 to the *Columbia*, *State of California*, *State of Oregon*, and *Queen of the Pacific*, steamships of a size, convenience, and finish which has added much to the comfort of the voyage, and which continue to divide travel with the California and Oregon railroad. The Oregon Development company runs to Yaquina bay from San Francisco, owning the steamers *Yaquina City*, *Santa Maria* and *Willamette Valley*. A line was also run to Coos bay in Oregon, to which belonged the *Empire*, *Coos Bay*, and *Arcata;* and a line to Humboldt bay in

California, to which belonged the steamers *Continental* and *Humboldt*. The steamers *Los Angeles*, *Mexico*, *Salinas*, *Mary Taylor*, *Wilmington*, *Eureka*, *Pomona*, *Constantine*, *Ventura*, *Newbern*, *Kalorama*, *Monterey*, and perhaps others which have been overlooked, were employed in the coast trade in that period between 1875 and 1885, when the requirements of trade between San Francisco and the southern coast particularly, have made it necessary to transfer to that line the *Queen of the Pacific* and the *Santa Rosa*. There were built for the Pacific Coast company two fine colliers in 1885 or thereabout, neither of which are now in that service—the *Walla Walla* and the *Umatilla*, which were both stranded, but raised and refitted, and were converted into passenger steamers.

In the following list of wrecks are included those of vessels belonging to other lines as well as the Pacific Mail. In February 1852 the *General Warren*, Captain Thompson, was wrecked on the coast above the mouth of the Columbia, and forty-two lives lost. In the same month the *Sea Gull*, Captain Lichener, was struck by a heavy sea on leaving Humboldt bay, and wrecked. On the 28th of February, the same year, the *North America*, Captain Blethan, of the Nicaragua line, with 800 passengers, was wrecked on the rocks below Acapulco, by running too close in shore. The passengers were saved, but suffered severe hardships in reaching a place of refuge. In August the same year the *Pioneer*, also of the Nicaragua line and a new steamer built for Vanderbilt, was leaking badly 200 miles south of San Francisco, with 222 passengers on board, who were taken off by the *Sea Bird*. The *Pioneer* was run into St Simon's bay and repaired. The *Arispe* was wrecked off Cape Mendocino in 1852.

There were forty-seven marine disasters on the coast in 1853, the losses from which were $1,251,000, among which were the *Tennessee*, Captain Mellus, which went ashore near the entrance to San Francisco bay, March 6th. On the 16th of the same

month the *Independence*, Captain F. A. Sampson, of the Nicaragua line, ran on the rocks north of Acapulco, and when beached took fire. The lives of 197 passengers were sacrificed, and those who escaped lost all their effects. In April the *S. S. Lewis*, Captain Sparrow, of the same line, went ashore in a fog eleven miles above the entrance to San Francisco harbor, and was totally wrecked. The passengers and crew were rescued by the United States steamer *Active*. On the 2d of December the *Winfield Scott*, Captain S. F. Blunt, struck a rock twenty-five miles southeast of Santa Bárbara, in a fog, wrecking the vessel. The passengers were saved. On the 24th of the same month, the *San Francisco*, Captain Watkins, on her way from New York to San Francisco with the 3d regiment of United States artillery on board, on the night of the 22d encountered a storm which rendered her unmanageable, and on the 24th a wave struck her which shattered her quarter deck and hurricane deck, and carried away the upper saloon filled with about 200 officers and soldiers. The damage sustained by the shock put the remaining 600 in deadly peril. For six days the passengers were only able to keep themselves alive, but finally those on board were rescued by other vessels which stood by the *San Francisco* until the storm abated, although themselves in jeopardy.

In March 1854 the *Georgia*, of the original United States Mail line, commanded by Captain McKinstry of the navy, was wrecked three days out from New York. In June 1854 the *Arispe* was lost near Point Arenas. In October the *Yankee Blade*, Captain Henry Randall, of the independent line, with 800 passengers, was wrecked fifteen miles above Point Conception, and thirty lives lost, with $153,000 in treasure. About this time the *West Point* and the *Polynesian* were wrecked near Honolulu; the *Major Tompkins* in Fuca strait, and the *Peytonia* on the Chilean coast. In December the *Southerner*, Captain

Sampson, belonging to Captain John T. Wright, sprang a leak on Columbia bar, and was wrecked on the beach of Washington. Much hardship was suffered by the passengers in crossing the mountains. On the 24th of June 1855 the *America*, another of Wright's vessels, was burned at Crescent City. Her passengers narrowly escaped, and her cargo, worth $140,000, was a total loss. In August 1857 the *Columbia*, the first Pacific Mail steamer on the Oregon line, was lost in the China sea. The sinking of the *Central America*, Captain Herndon, off the coast of Florida on her way to New York, with 582 passengers and $1,500,000 in gold-dust, was one of the notable events of that year. She sprung a leak in a hurricane, and after thirty-three hours of slowly settling in the sea, went down with 419 persons, the remainder being rescued by a brig. Captain Herndon, the explorer of the Amazon, perished with his passengers. This terrible disaster caused a general bereavement in California. Little business was transacted for two days, and the criminal cupidity of the mail companies in entrusting so many lives to a ship "whose name they had been compelled to conceal"—she was formerly the *George Law*—was talked about, and that was all—none of the managers were hanged. The president of the board of supervisors called a public meeting, and a mass meeting followed, at which resolutions were adopted denouncing the companies, and offering suggestions for the safety of passengers in the future. A commercial panic in the Atlantic states was greatly increased by the loss of the treasure on the *Central America*. The *Sea Bird*, belonging to Wright, was burned near Discovery inlet in Fuca strait in the autumn of 1857. The *Gold Hunter* was early lost on the coast of South America, but I have not the date.

On the 5th of January 1860 the *Northerner*, Captain W. L. Dall, struck a rock at the entrance to Humboldt bay, and the vessel soon sank. The number of

persons lost in effecting a landing was thirty-eight, and the treasure $14,000 in government funds. On the 14th of October the *New Granada*, Captain Hawes, of the Nicaragua line, was wrecked near Fort Point, after making the voyage out from New York in safety, the pilot being to blame. Not far from this time the *Isthmus* was lost off Cape Flattery.

In January 1862 the *Republic*, of the Mexican line to Mazatlan, was lost just outside the Golden Gate; and soon afterward the *Columbus*, running from Panamá to Acajutla, was wrecked at Punta Remedios, Central America. The following steamers were wrecked in the China seas this year: *Santa Cruz*, burned in the Yang-tse-Kiang river in February; *Union Star*, exploded at Shanghai in June; *America, No. 2*, burned at Kanagawa, Japan; and *Cortez*, burned in June. In July the *Golden Gate*, Captain W. H. Hudson, was burned near Manzanillo. The number of passengers and crew lost was 198, and the value of property and treasure engulfed was estimated at $2,000,000. This calamity, like that of the *Central America*, cast a gloom over the whole state. In December the *Ariel* was captured by the rebel privateer *Alabama*. She was finally wrecked on the Japan coast in 1872 or 1873. The grand total of shipping losses in the Pacific ocean in 1862, including sailing vessels, was $6,522,-609.55.

On the 14th of March 1863 the *Senator*, which had "earned more money than she could float in her best days," was sunk at the entrance to San Pedro harbor, but was raised, and sailed to San Francisco in May, and was afterward rebuilt and converted into a bark, which carried lumber to New Zealand. The towing steamer in the harbor of San Pedro, the *Ada Hancock*, exploded her boiler April 27th following, killing thirty persons who were being conveyed to the ocean steamer. In November a gale in the harbor of San Francisco inflicted a good deal of damage on shipping, among lesser accidents sinking the ship *Aquila*, which had

on board the monitor *Comanche*, sent out for the defence of San Francisco, but which had not yet been put together, nor even landed. After some delay the *Aquila* was raised, and the monitor completed. There do not seem to have been any notable disasters at sea in 1864, but on the last of May 1865 the *Golden Rule*. Captain Dennis, of the Nicaragua line, on its route from New York to Greytown was wrecked on Roncador reef, thirty-five miles from the island of Old Providence. She had on board 535 passengers and 100 crew, who were all landed on the reef, where they suffered all the discomforts of shipwreck, including a lack of water. The purser made his way to Aspinwall in an open boat, being until June 6th on the sea, and the United States steamers *Huntsville* and *State of Georgia* brought the passengers to Aspinwall. It was the first voyage of the *Golden Rule*, for whose loss her captain was severely censured by the passengers. Another more terrible shipwreck was that of the *Brother Jonathan*, Captain S. J. De Wolf, July 30th, near Crescent City. In open day and clear weather the vessel, which was heavily laden with milling machinery for Idaho mines, and had a full list of passengers, struck on an unknown sunken rock, and in three-quarters of an hour had gone to the bottom. The wind being strong and sea rough, only one boat, containing sixteen persons, mostly the crew, reached the land; 150 perished. It was on this ship that George Wright and wife, E. D. Waite, James Nesbit of the San Francisco *Evening Bulletin*, and a number of well-known business men met their fate. The *Jonathan* was an old vessel refitted, and had in her the engines of the *Atlantic*, wrecked on Fire island in 1848. Her officers all went down with the ship. Over this sad event there was general mourning throughout California and Oregon.

In April 1866 the British steamer *Labouchere*, Captain W. A. Monat, struck on a reef off Point Reyes. She belonged to the Hudson's Bay company,

and had only commenced to run between Victoria and San Francisco in March. Her engines took the first prize at the London exposition of 1851. Her cargo, which was a loss, was valued at $50,000. On the 28th day of November the British bark *Coya* was run on Pigeon point, near Half Moon bay, and 26 lives lost.

In 1867 the *Santiago de Cuba*, of the Nicaragua line, was wrecked by going ashore a few miles from Atlantic City, and six of her passengers drowned in attempting to land. The United States revenue steamer *Shubrick* went ashore in a fog near Mendocino, and was broken up. In 1868 the United States steamer *Suwanee* went ashore and was lost. The *Hermann* was wrecked off the northwest coast of the island of Nipon in the Japan sea, in 1869, when several hundred lives were lost, chiefly of Japanese soldiers. A few years later the *Ariel* was wrecked near the same spot, but without loss of life.

The steamship *Sierra Nevada*, Captain J. C. Bogert ran on a reef seventy-five miles south of Monterey, in a fog, October 17, 1869, but her passengers were saved. This put an end to a well-known and popular steamer long used in the coast trade. About this time there were burned in Chinese waters the *John T. Wright*, *Surprise*, *Martin White*, and *Willamette*. In February 1870 the *Golden City*, Captain Comstock, bound to Panamá, went ashore in the open day, at Cape Lazaro, Lower California. The passengers were landed on a wilderness coast, and nine of them lost in the effort to reach Santa María bay, twenty-five miles distant, to which the people had to walk over a desert of sand hills and chaparral. The *Golden City* was a fast and fine ship of 2,400 tons, and her captain seems to have been wholly to blame for her loss. The passengers and treasure were returned to San Francisco on the *Fideleter*, about a month after the wreck. On the 5th of June the *Active*, Captain C. E. Lyons, belonging to Holladay and Brenham, who had purchased her in 1866, missed her course in a fog when

near Cape Mendocino, and struck a sunken rock. The passengers were landed and encamped on the beach, until the *Pacific*, Captain Scholl, came to their relief. The vessel and the cargo, worth $100,000, were lost. The *Active* was built for the government survey service in 1849. On the 19th of October the United States steamer *Saginaw*, struck on the reef around Ocean island, near Midway island coaling station. At the first blow the bottom fell out, but the ninety-three persons on board gained the island, where they had to remain until the 18th of November, when they sent the ship's gig on a voyage to Honolulu for assistance. The gig was raised ten inches amidships, and five inches at the ends, and a deck put over all, with places for the men to sit and row. The adventurers were Lieutenant William Talbot; coxswain, William Halford; master, Peter Francis, and seamen, John Andrews and James Miner. They were provided with rations for thirty-five days, consisting of some beans, rice and cooked wheat. They experienced bad weather almost from the start. Their chronometer from being knocked about and getting wet became almost useless. They lost their drag and could not steady the boat. Land was not sighted until the 16th of December, when they were unable to make it, but were buffeted about for three days, and on the 19th capsized in the surf at Hanalei bay, when Talbot, Francis, and Andrews were washed away and lost. The boat was righted by a sea, and the remaining two men got into it. Soon after Muir became delirious, and was lashed to the boat by Halford. Once more the boat was overturned, but finally came into smoother water, when Halford waded ashore, and succeeded with much effort in guiding Muir to land, after which he secured the instruments and charts. Then both men fell asleep from exhaustion, and when Halford awoke his companion was gone. In his delirium he had wandered off and died. Halford was discovered by the natives and piloted to a plantation, the American

consul informed and a vessel sent to the rescue of the *Saginaw's* crew. Halford was thirty days and fourteen hours in the boat; his body was covered with bruises and sores. The *Moses Taylor* finally brought the rescued persons to San Francisco in February 1871. In December 1871 the *Salinas* running between Santa Cruz and San Francisco was wrecked off Point San Pedro. On the 5th of December 1872 the *Sacramento*, Captain Farnsworth, with 246 passengers, went ashore on Geronimo island, Lower California. The passengers and a part of the treasure were saved. For five days the people were encamped on a barren shore in tents improvised from sails and table linen. They were finally taken off by the *Montana* from San Diego.

The *George S. Wright*, Captain Buislay, was lost in the winter of 1872–3 in Charlotte Island sound, on her way down from Sitka, with between thirty and forty souls on board. It was not known whether she foundered from striking on a sunken rock, or exploded her boilers. From subsequent revelations it appeared that some witnesses might have been saved to tell the story of her disaster, had not the Indians murdered them for the sake of plunder. The *Wright* was built in Puget sound, and was purchased by the Western Union Telegraph company, and at the time of her loss belonged to Holladay.

The *Prince Alfred*, Captain Scholl, went ashore near Point Reyes, June 14, 1874, and was broken up. No lives were lost. She was from Central American ports, and purchased by John Rosenfeld and others in 1870 to run between San Francisco and Victoria. The same year the *Costa Rica*, running in the Honolulu mail line, struck on the rocks on the north side of the Golden Gate, but was hauled off and repaired. On the 22d of September 1874 the large steamer *Alaska*, Captain Van Sice, was carried ashore by a typhoon in the China sea, but was uninjured, although thousands of persons lost their lives by the storm.

The *Japan*, Captain Warsaw, was burned on the 17th of December 1875, within eight hours' sail of Hongkong. She carried 557 passengers, 414 of whom, mostly Chinese, were lost. The treasure was saved; the mails and cargo were burned. The *Ventura*, Captain Leland, formerly the United States steamer *Resaca*, but belonging to Goodall, Nelson and Perkins, struck on a rock twenty-five miles below Monterey April 20, 1875, and became a total loss, without loss of life. On the night of the 4th of November of this year the *Pacific*, another steamer of the same line, commanded by J. D. Howell, a brother-in-law of Jefferson Davis, and a midshipman on the *Alabama*, carrying 238 passengers, was run down by a sailing vessel, the *Orpheus*, Captain Sawyer, just after coming out of the Fuca strait. From the narration of Henry L. Jelly, one of only two survivors, the collision was the result of inattention to duty of both captains. In three-quarters of an hour the *Pacific* sank to the depths of the ocean, but the *Orpheus* passed on, and although injured, survived the shock which sent a rotten steamer to the bottom.

In December 1876 the propeller *Montana*, Captain Douglas, which was sold by Holladay to the Pacific Mail company, and by them to the Colorado Steam Navigation company, was burned at Guaymas. There were twenty-five other disasters to different steam vessels on the coast in 1876 that were not total losses. Of those that were, there was the *Kalorama*, which went ashore at San Buenventura in Februrary; the *Fideleter*, which ran on the rocks at Point Arenas April 3d; and the *Messenger*, which was burned at Coos bay in October of 1876. None of the wrecks involved the loss of life.

The *City of San Francisco*, a new vessel of the Pacific Mail line, commanded by Captain Waddell, left New York in September 1875 for San Francisco. She struck, May 16, 1877, an unknown rock in latitude 16° 6′ north latitude, and in sixty-two minutes

had foundered. Her two hundred passengers were saved by a Mexican gunboat, which carried them to Acapulco, where the *Costa Rica* took them on to San Francisco. The *City of San Francisco* cost $800,000. Not long before this the *Bienville*, chartered, and the *City of Guatemala* had been lost; also the *Continental*, in the Mexican trade. Eight lives were lost in the latter wreck. The *Constitution*, which cost in 1861 about $1,000,000, was for a year in government service, arriving out on this coast in August 1862. From 1872 to 1874 she was laid up, but put on her route again after being repaired. In 1877 she began running to Victoria, Captain Seabury in command, but returning took fire, and so came into the harbor of San Francisco, with fifty passengers and $67,000 in treasure. This was the closing scene of her usefulness.

The *Georgia*, which had been built during the war, and purchased afterward by Clyde, was wrecked in the straits of Magellan June 23, 1876, on the way to California, but was repaired and put on the Panamá line with her consort, the *Wilmington*, in 1877. On the 30th of September 1878, Captain Howard being in command, she was run on a reef and sunk to her hurricane deck off Punta Arenas, Central America. She had ninety-seven passengers on board, who were taken back to Panamá, and brought to San Francisco on the *Colima*.

On the 19th of April 1879 the *Great Republic*, Captain Carrol, was run aground on Sand island inside the bar of the Columbia, and became a total wreck, eleven lives being lost in the attempt to reach Astoria from the vessel. There were whispers of conspiracy in connection with the loss of the *Great Republic*, and whether true or false, it must ever remain a mystery to those who know the channels how the ship came to be where she was grounded. She was built by Henry Steers of New York for the China trade, and cost nearly $1,500,000 in 1857. In 1878 she was sold

for the nominal price of $25,000, and put in the Portland trade, but was too large for the river. She was insured for $80,000.

It is not pretended that a complete list of the steamship losses of twenty-seven years is here given. But who would have it more? What an amount of money is represented in these sixty-eight wrecks, every one costing from $250,000 to $1,000,000, and some more than that! Let us say that the vessels all together were worth when they were destroyed $31,000,000. Then let us say that the treasure lost was only half as much, and that the cargoes which went to the bottom were worth as much as the treasure. Add to that sum the individual losses to passengers of money and effects, from a few hundreds to several thousands—for in almost every case passengers lost everything, even when they escaped with their lives—and the sum total could not fall short of sixty or seventy millions, while it might have been much more. And then the lives sacrificed—2,397 that I have here enumerated! It is an appalling record. The question arises, was it unavoidable? The accounts given show that in a large majority of cases of steamer wrecks the cause was running upon rocks, reefs, or the shore itself. It is plain that these vessels should have kept out to sea when not compelled to call at ports on their route. This part of our history is not very creditable, and shows that ordinary discretion is as much needed as the advancement of science, applied to navigation. It shows also the enormous drain made upon California during many years; for the money losses and bereavements fell heavily upon the young state; and it is a surprising manifest of what transportation in this single form has cost California.

CHAPTER VI.

LIVES OF THE VANDERBILTS.

CORNELIUS VANDERBILT THE ELDER—FAMILY ANCESTRY—CORNEILE THE BOATMAN—CALIFORNIA STEAMSHIP LINE—INVESTMENTS IN RAILROADS—WILLIAM H. VANDERBILT—BANKER AND FARMER—RAILROAD CAREER—ORIGINALITY AND BOLDNESS OF ENTERPRISE—THE VANDERBILT SYSTEM—CORNELIUS VANDERBILT THE YOUNGER—NEW RAILWAY MANAGEMENT—SYSTEMATIC CHARITIES—ENORMOUS INFLUENCE FOR GOOD—MARRIAGE—DOMINANT BENEFACTORS OF THE RACE.

IN the preceding pages the name of Vanderbilt frequently occurs in connection with Atlantic and Pacific ocean traffic; the present chapter will be devoted specially to the history of his life, and those of his successors.

In addition to his great ocean enterprises, the first Cornelius Vanderbilt was among the foremost to grasp the possibilities of the modern system of interior communication; to foresee and bring to pass the mighty results that have followed the consolidation of competing lines and of rival interests, in short the creation of the great railroad systems of to-day. Already in the possession of enormous wealth, of many years' experience in the movement of passengers and freight, aided moreover by an energy and genius that never failed of success, he entered the field at a time when the rarest of opportunities lay within reach of him who could see and appropriate them.

While one of the most successful men in the world, Mr Vanderbilt was succeeded by a son and a grandson, both preëminently qualified to continue the work. In Cornelius Vanderbilt the younger, appeared qualities

that were fully recognized, and which indeed compelled recognition.

By some the enormous accumulation of wealth in the hands of the Vanderbilts, at one time exceeding $200,000,000, has been regarded as an evil to mankind. By such men the millionaire is considered as an oppressor of his race, one by whom labor is impoverished and industry paralyzed. But by the more enlightened the aggregation of wealth in the hands of individuals is regarded as a blessing rather than a curse; for without it there could be no such improvements as the present century has witnessed. Without it there could be neither railroads nor steamships, neither telegraphs nor telephones, neither schools nor churches, neither literature nor art; in a word there could be no civilization. Not to him who squanders his substance does the community owe most, but to him who saves and invests, whose property, instead of being wasted, is reproduced and multiplied.

What is civilization but the results achieved by labor set in motion by wealth, the wealth acquired by skill and foresight, by thrift and self-denial? So far from being a menace to the people, millionaires and sometimes even monopolies are a public benefit; and nowhere is this more clearly exemplified than in the case of the New York Central railroad, formed by the consolidation of many lines, and for more than a quarter of a century under the control of the Vanderbilts. Just as the owner of a dozen stores can perhaps sell goods cheaper than he who owns but one, just as the owner of a score of steamships can run them cheaper than he who owns a single vessel, so can the New York Central carry passengers at lower rates than any line on this continent, can carry freight so cheaply that it has driven from competition even the boats that plied on the Erie canal, built by the state and free for the use of all. Nowhere perhaps in the world has a railroad or a

system of railroads been managed with such economy and yet with such efficiency, as those which are included in the Vanderbilt system.

It was in the days of Governor Stuyvesant, about the middle of the seventeenth century, when the common ancestor of this long descended family, Jan Aertsen Van der Bilt, came with the Knickerbockers to the western world. Jan was thrice married, the patronymic of his second wife, Diesber Cornelius, being given, three generations later, to him who was destined to play a leading part in the greatest shipping and railroad enterprises of the age. To one of his sons, named Jacob, he sold or presented a tract of land in Staten island, probably acquired from the Indians, and taking to wife one Neeltje (Cornelia) Denyse, the latter founded another branch of the family, becoming the father of eleven children.

About this time a party of Moravian refugees took ship for Staten island, forming there amid the primeval wilderness, the settlement of New Dorp. Of this sect Jacob and his family were among the strongest supporters, building at their own expense a vessel with which to assist the emigration of the brethren from Germany. To his eldest son, also called Jacob, seven children were born, the youngest of whom, named Cornelius, was the father of him whose career forms the groundwork of my sketch.

For nearly two centuries, generation after generation of the Vanderbilts had lived on their sterile island farm, had lived in contentment, though perhaps with less of the real comforts of life than at the present day fall to the average lot of mechanics. During all these years they had tilled the soil and planted it, had garnered their scanty harvests, had pastured their cattle and milked their cows, without in the least concerning themselves about the great world beyond. For them the busy city across the bay had no attractions; they coveted not its wealth;

they cared not for its amusements; they had absolutely no ambition in life except to earn an honest livelihood, to pay their debts, and to attend with regularity their little Moravian meeting-house. But then the family tree was to bear fruit of another description in the person of a man destined for a brilliant career of conquest, the peaceful conquests of civilization; one who would stamp his impress on the commercial activities of the time, would add to the sum of the nation's wealth and comfort more than had ever been imagined in the fondest dreams of the enthusiast. That man was Cornelius Vanderbilt.

A farm near Stapleton landing was the birthplace of Mr Vanderbilt, and the day the 27th of May 1794. The house where he was born was a one-story five-roomed edifice, shingled, and with dormer windows, on the eastern slope of Staten island, only a few feet above high water mark, and so near to the beach that the garden lawn was washed by the tides. Here he developed rapidly into a hardy and vigorous boy, tall, strong, and muscular, an expert swimmer, a fearless rider, one who could sail a boat, handle tools, and in fact could do or learn almost anything except his lessons. School and school-books were to him an abomination; and though as vigorous in mind as in body, he could never be induced to study; he would work rather, though of course, like other lads, he preferred above all things out-door sports.

But if Cornelius hated school he loved the water. At an early age we find him sailing the periauger, a two-masted boat of primitive construction, in which his father carried his produce to market. At twelve he was intrusted with the work of a man, often being sent in charge of teams to superintend the unloading of shipwrecked vessels. At sixteen he was intent on going to sea, and to do so must run away from home, for at that date a boy was bound by custom as well as by law to work for his father until the age of twenty-one. But from this he was dissuaded by his

mother, who promised him a hundred dollars with which to buy a periauger of his own, on condition that he should plough and plant with corn an eight-acre lot so full of rocks that it had never before been worked. This he accomplished in the time agreed upon, and with money in hand made haste to secure the coveted prize, a bran new boat which lay moored to the dock at the Port Richmond shore. The incident he remembered until the day of his death. "Never," he remarked, "did I feel so much real satisfaction as on that bright May morning, sixty years ago, when I stepped into my own periauger, hoisted my own sail, and laid my hand on my own tiller."

At this time the fortifications of Long and Staten islands were being rapidly pushed forward by the government; for relations with England were strained, and war seemed almost inevitable. Laborers must be carried to and from New York, and with other traffic gave to Cornelius abundant work. But one thing troubled him. The money for his boat had been furnished by his mother, and must be repaid with all possible despatch. Working sixteen hours a day therefore, and saving from his earnings every cent that could be spared, he quickly laid by the required sum, and without a word laid it in his mother's lap. This was probably the proudest day in his life.

By ceaseless toil and strict economy the young man gradually added to his savings and extended his business until, at eighteen, he was captain and part owner of one of the largest periaugers in New York harbor, in addition to his interest in other vessels. Throughout the war of 1812 he held a contract to carry provisions to the several forts, and this he did at night after a hard day's work, loading at the battery when his other duties were performed. So reliable was he, and withal so daring and skillful, that 'Corneile the boatman,' as he was styled, was

always the first one called upon for any task involving special difficulty or danger. Thus when during a severe storm the British fleet was repulsed off Sandy Hook, and reënforcements must be had in case of another attack, Cornelius was sent for to carry the messengers to headquarters. Arriving on the ground, a staff officer asked him whether a boat could live in such a sea. "It can," he said, "if properly handled." "Then will you take us to the battery?" "Yes, but I shall have to carry you part of the way under water." He did so, and when the party landed at the slip there was not a dry thread among them.

It was a gruesome storm; but a promise once made, not even the rage of the elements could prevent him from carrying it out. The qualities which he displayed as a boatman were the same which marked his later career as a railroad millionaire, the power of doing and the will to do whatsoever he undertook. Throughout that career he was guided by self-established rules, by a strength of purpose that varied not, by a resolve as immutable as the rising and setting of the sun. Once he had determined on a given course, there was no such thing as looking back. At all hazards he would carry out his project to its legitimate conclusion, and that with an energy that was satisfied only with success. Nor was he ever doubtful of success; for like all great men he was conscious of his own powers, conscious of his ability to achieve, in the face of all obstacles, whatever lay within the scope of human accomplishment.

During the war Cornelius found many opportunities for making money; or if he did not find them he made them. At eighteen he had become the owner of two sea-going craft, and the captain of a third. To these additions were made from time to time, as means and opportunity offered, now a sloop and now a schooner; so that when balancing his books on New Year's eve of 1817, he found himself, at twenty-

three, worth $9,000 in cash, in addition to his little fleet of vessels. During all these years he had turned his hand to whatever he could find to do so long as it brought in money, transporting freight and passengers, trading, and even peddling; at one time carrying boat-loads of fish up and down the shore, and at another cargoes of melons which he sold wherever he could find a purchaser. Meanwhile he had introduced many improvements in the science of ship-building, and his models and methods were discussed and imitated by the most experienced masters of the craft.

When the success of Fulton's experiment was assured, Mr Vanderbilt took passage on one of his steamers to Albany, and after observing closely the working of her engines and machinery, came to the conclusion that, in the navigation of the future, the sail would be largely superseded by steam. Acting on this conviction with his usual promptitude, he at once gave up his coasting business, disposed of his vessels, and though making at this time from $2,000 to $3,000 a year, accepted the captaincy of a tiny steamboat at a salary of $1,000 in order to learn the business. The name of the craft was the *Mouse of the Mountain*, and of her owner, Thomas Gibbons, a man of means and enterprise who for many years waged a bitter war with Fulton & Livingston, to whom had been granted by the state of New York the exclusive right of running steamers on all the waters within its jurisdiction. After a seven years' struggle the dispute was decided by Chief-justice Marshall in favor of Gibbons, on the ground that the privilege was unconstitutional.

After running the *Mouse of the Mountain* for about a year, in 1818 a larger steamer named the *Bellona* was built under his supervision, and with others placed on the line between New York and Philadelphia. In the following advertisement, which appeared

on the 15th of September, 1826, the route is more fully described:

UNION LINE
FOR PHILADELPHIA AND BALTIMORE
THROUGH
TO PHILADELPHIA IN ONE DAY!
TWENTY-FIVE MILES OF LAND CARRIAGE, BY NEW BRUNSWICK, PRINCETON, AND TRENTON.

The splendid new steamer *Emerald*, Captain C. Vanderbilt, leaves the wharf, north side of Battery, at 12 o'clock noon every day, Sunday excepted. Travellers will lodge at Trenton, and arrive at Philadelphia by steamboat at 10 o'clock next morning!

FARE ONLY THREE DOLLARS.

At this date the Gibbons line was entirely under the control of Mr Vanderbilt, who by careful management, by keeping down expenses, by discharging all unnecessary help, and above all by making his trips on time, had brought it to a paying basis. While thus employed he had found time to make a careful study of the build and machinery of steamboats, observing their defects and considering how best to remedy them. And now his attention was drawn to the rich traffic of the Hudson and Long Island sound, which, as he perceived, could be largely expanded with better facilities for transportation. Resigning his position therefore—although offered on his own terms a half interest in the Gibbons line, then earning $40,000 a year—in 1829 he started in business for himself.

Fulton was long since dead; but the invention which he introduced had been followed by a vast commercial development, by an enormous increase in the volume of traffic, and especially of steamboat traffic; for it was not until many years later that the railroad came into active competition. Among those who controlled this traffic were many men richer and more experienced than Vanderbilt, such men as Stevens of Hoboken, and Daniel Drew of New York; but all were compelled to give way before his superior enterprise and sagacity. By constructing larger, faster,

and more commodious boats, by availing himself of all the latest appliances for speed and comfort, and by cutting down rates to the lowest figures that would return a profit, he quickly overcame all rivalry, either securing a monopoly of the more desirable trade, or compelling those who held such monopoly to buy him off.

For twenty years he was engaged in building steamers and establishing steamboat lines, reaching out in all directions, on the Hudson, on Long Island sound, southward to Philadelphia, and northward to New Haven, Providence, and Boston. To insure the success of these enterprises, he brought to bear all the resources of his keen and comprehensive intellect, of his financial genius, and his marvellous energy, taxing to the utmost his phenomenal capacity for work. Thus at the age of forty he had at least a score of vessels in commission, all of them of superior pattern, and competing successfully with old established lines. It was about this time that the title of Commodore was bestowed upon him in recognition of his ability and worth; perhaps also for the reason that of all the vessels which he built or purchased, not one was wrecked or seriously injured. None of his steamers were insured, for, as he remarked, "good vessels and good captains are the best insurance. If corporations can make money by insuring, so can I."

In 1850 his operations were extended to a much wider field, embracing indeed almost the entire continent. At that date the Isthmus traffic, then of enormous dimensions, was in the hands of the Pacific Mail steamship company, which ran its steamers to and from either shore, charging for its execrable service $600 a trip. "I can make money at half that rate," said Vanderbilt, "taking my passengers by Lake Nicaragua, and saving at least seven hundred miles of distance." Building a large steamer, named the *Prometheus*, he sailed in her for the Nicaragua coast, and selected his transit route, from Grey-

town to San Juan del sur. In the following year he placed three steamers on the Atlantic side, and four on the Pacific. In 1853 three others were added to the fleet, and a branch line established from New Orleans to Greytown, with smaller vessels on Lake Nicaragua and the Rio San Juan. With its cheaper fares and shorter distances, with its more attractive scenery, and above all with its more healthful climate the Nicaragua route quickly came into favor, and for a time the rush of travel was enormous, yielding, it was estimated, a net revenue of more than $1,000,000 a year.

Thus it was that for nearly half a century Mr. Vanderbilt knew no rest from labor. He was approaching three-score years of age and was reputed to be worth at least $10,000,000, although the exact amount of his wealth was unknown, probably even to himself. At least he could afford himself a rest, and this he resolved to take, selling a controlling interest in the Nicaragua route to the Accessory Transit company. In 1853, accompanied by his family, he sailed for Europe on board the steam-yacht *North Star*, a vessel of two thousand tons burthen, and the largest of the kind that had ever been constructed. Its equipments were on a magnificent scale, with its main saloon lined with satin-wood; its staterooms upholstered in green and gold, in crimson and orange; its berths supplied with the costliest of lace curtains; its furniture of rosewood, covered with figured-plush velvet; and its spacious dining-room, whose walls were covered with a preparation of ligneous marble, polished to mirror-like brightness.

As a specimen of what could be accomplished under republican institutions, it was in truth a revelation to the people of Europe; for here was the largest steamer then afloat, an ocean palace, built entirely on American models, by American workmen, and commanded by a man who from a lowly sphere in life

had risen to be one of the wealthiest and most influential citizens of the New World. At every port where the vessel called its owner was received with honors befitting the progress of a monarch. At Southampton, London, St. Petersburg, Boulogne, Marseilles, Genoa, Naples, Athens, Constantinople, he was féted, feasted, saluted, and visited by many of the notable men of the land, including even the representatives of royalty. Returning home, after a four months' trip, the yacht was rounded to in front of Stapleton landing, where still resided his aged mother, and to whose hundred dollars, spared from her scanty savings to buy his first periauger, he owed his success in life. After firing a royal salute, he paid her a most affectionate and what proved to be a farewell visit, for three months later she died, invoking with her dying breath a blessing on her dutiful and well-beloved son.

But glad as Mr Vanderbilt was to return to the scene of his labors and his victories, he found a bitter disappointment awaiting him, and the more bitter since it came from men whom he had befriended and enriched. The directors of the Transit company, all of whom had become wealthy through the profits of the Nicaragua route, refused to pay him his share, according to the terms of the contract. To enforce his claim by process of law would be an international affair, and one involving great expense of time and money. What he resolved to do was this, and as his message was of the briefest, I will give it in his own words: "Gentlemen," he wrote, "you have undertaken to cheat me. I won't sue you, for law is too slow. I will ruin you." And he did so; placing on the route a fleet of steamers which soon drove the company into bankruptcy.

For some years longer Mr Vanderbilt retained his hold on the steamer traffic with California, whereby it is said that he accumulated a further sum of $10,000,000. Meanwhile he had engaged in what was

in this direction the crowning enterprise of his career. At the time of his return from Europe war had been declared between England and Russia, and one of the first measures of the British government was to charter the Cunard steamers for the transportation of troops. This gave to the Collins line the entire service between New York and Liverpool, for which a subsidy had been granted of $33,000 a trip. But the service was inadequate, and to supply the deficiency Mr Vanderbilt proposed to form a partnership with Collins, and to place at his disposal two additional vessels. The proposition was rejected, for no apparent reason except the timidity of the latter, whereupon Vanderbilt offered to carry the mails for $16,000 a trip, the subsidy allowed the Cunard line.

But the Collins influence was strong in congress, and the great shipowner was informed that if he wished to run his steamers across the Atlantic he must run them at his own expense. This he resolved to do, and building what were then the three fastest steamers in the world, among them the famous *Vanderbilt*, established a new line between New York and Havre. Then came the long-remembered ocean race between the *Arabia* and *Persia* of the Collins line, and the *Vanderbilt* and *Ariel* of its competitor, resulting, with rare exceptions, in the defeat of the former. During all this time Mr Vanderbilt was preparing for his coup de main, which at one fell stroke should annihilate the foe. "Gentlemen," said Napoleon, on the eve of Austerlitz, "we shall end this campaign with a thunder-clap." And like a thunder-clap fell on the man of subsidy the news that his rival had offered to carry the mails for nothing. A few months later the long-established Collins line disappeared forever from the face of ocean.

But after a fair trial, and a thorough study of the business and its prospects, Mr Vanderbilt came to

the conclusion that "it would not pay to push it" in the face of European competition. The Crimean war was ended and the Cunard line was re-established, with others threatened or already in existence. Moreover, civil war was imminent, and to a man of his foresight and sagacity, its effect on the shipping interest could not be doubtful. Thus, before the outbreak of the rebellion, he had disposed of many of his vessels, and at the close of the war all of them, investing the bulk of his means, then estimated at from $30,000,000 to $40,000,000, in railroads.

But his favorite vessel, the *Vanderbilt*, the finest merchant steamer then afloat in American or other waters, he devoted to the service of his country. The destruction wrought by the *Merrimac* in Hampton roads had caused the direst perplexity at Washington, and to meet the emergency Mr Vanderbilt was summoned to the White house. "Will you undertake," asked Abraham Lincoln, "to stop that rebel ram and keep her away; if so what will be your terms?" "Not all the greenbacks in your treasury would hire me to do it," was the answer. "I am not the man to make money out of my country's misfortunes." "But," he continued, observing the president's distress, "I have a ship which I think will give a good account of that devil. If you will man her I will take command myself. My only condition is that I shall not be interfered with by the navy department." Two days afterward he was steaming into the mouth of James river, somewhat to the astonishment of the admiral in command, who wondered what ship was this whose shadow crept like a dark looming cloud over the water.

After showing his credentials he was asked what he intended to do in case the *Merrimac* should make her appearance. "Run her down," he said, "strike her amidships and sink her." "And how can I help you?" "Only by keeping out of the way." But the *Merrimac* did not appear, and returning home he

offered the use of his vessel to the government until the conclusion of the war. The offer was most graciously accepted, and equipped as a cruiser the *Vanderbilt* made a twelve months' cruise in search of the *Alabama*, returning so badly strained that her engines were taken out and the craft disposed of to a New York shipping firm. Under the name of the *Three Brothers* the good old ship has since made many a trip around the Horn, and many a goodly cargo of wheat has she borne from the port of San Francisco.

And how did a grateful nation requite these timely services, this opportune loan of the fastest and most powerful merchant steamer afloat, valued at more than a million dollars in currency? They appropriated his vessel, whether by design or misunderstanding does not appear, but certain it is that the *Vanderbilt* was commissioned as belonging to the United States navy. And in return the national legislature presented her owner with a vote of thanks and a twenty-five dollar medal, "which shall fitly embody an attestation of the nation's gratitude."

At the close of the war Mr Vanderbilt had already passed the age which the psalmist allotted as the span of human life. By his friends he was urged to retire from business and pass in quiet the brief remainder of his days; but, as a fact, he was at this moment entering upon the most brilliant epoch of his career. For years he had controlled the commercial marine of the Atlantic coast, and now he was to control its railroads. And here it should be remarked that he was not, in the common acceptation of the term, a railroad speculator. He was not even a member of the stock exchange, and if at times he appeared to speculate, it was only to protect himself from the manipulations of others. That which he bought he bought as an investment, and not as the gamblers who trade from day to day on fictitious values. Says one who has made a thorough study of his life and

character: "He bought opportunities and sold achievements. He bought roads that were thriftless and in disorder, and he sold them when they had become models of order and thrift; or oftener he did not sell them at all, because he could make them pay more than anybody else." In the few words of advice which he once gave to a friend, words that have since passed into a proverb, is a world of experience and common sense. "Never buy anything that you don't want, and never sell anything that you have not got."

As early as 1844 Mr Vanderbilt became interested in railroads, his first purchases being in the New York and New Haven road. Foreseeing the growth of the metropolis and the great prospective value of a line which led from the north and west directly into its heart, a few years later he began to invest freely in the Harlem railroad, of which in 1857 he was appointed a director, and in 1863 its president. And well it was for the shareholders that he consented to give to it the benefit of his executive ability. At the former date the condition of affairs was simply deplorable. Through incompetent and dishonest management its credit was seriously impaired, its equipment was unserviceable, and its roadbed as shaky as its stock, which was then slow of sale at $3 a share. Under the new order of things it gradually rose to $7 or $8 in 1860, and to $10 or $12 early in 1863 When it became known that Mr Vanderbilt had advanced a large sum of money on the security of the road, its stock rose almost at a bound to $30, and in April of the same year to $50, under a rumor that some new franchise was to be granted, though exactly what no one could tell. A few days later an ordinance was passed by the city council of New York, permitting the construction of a street railroad from its terminus to the Battery. The next morning Harlem sold at

$75, and a week or two later at $100. But the end was not yet.

In June certain of the aldermen took council together, and as they thought, saw a good opportunity to fill their purses by selling the stock for future delivery, or, in Wall street phrase, by shorting it, and then after repealing the ordinance buying it at much lower figures. Of course each one confided the secret to his confidential friends, and these again to other friends, until hundreds of men were throwing Harlem on the market. Their scheme was quickly detected by the president; but still he sent in his orders to buy, taking, in fact, nearly all the shares that were offered, until the so-called bears had sold more stock than existed. Then the ordinance was rescinded, and at the same moment an injunction was issued by the court forbidding the company to continue laying its rails. And now it was supposed that Harlem would drop below $50 a share; but no such collapse occurred. On the contrary a day of reckoning was at hand for those who had sold what they did not possess.

After falling to $70 the stock rebounded to nearly its former figures, and there after some fluctuations it remained. The bears made haste to cover or fill their contracts; but they could not fill; for no one but the president had any shares for sale. Up went the stock, $5, $10, and $20 in a day, until at the end of a week it reached $170. Loud were the wailings of the aldermen, and sore their consternation at what they denounced as "the sharp practice of the commodore." But the commodore was inexorable, and the more so because their machinations had been directed against himself. When the final settlement was made, Mr Vanderbilt had relieved the members of the council of $1,000,000, and their associates of several additional millions. The aldermen were at length convinced that there were surer roads to wealth than shorting the Vanderbilt stocks.

To relate the story of Mr Vanderbilt's railroad operators would require many times the space allotted to this biography. Moreover, that story has been a hundred times repeated; how he secured the control of the Hudson River road, of the New York Central, of the Lake Shore and Michigan; how in the famous deal in Erie he drove to the wall such veteran operators as James Fisk, Jay Gould, and Daniel Drew. But in all these transactions his main object was to acquire control of the road, and by improving his property to make of it a paying investment. His methods of railroad management have thus been briefly summarized. First, buy your railroad; second, stop the stealing that was going on under the former management; third, improve it in every practicable way within a reasonable expenditure; fourth, consolidate it with any other road with which it can be run economically; fifth, make it pay dividends.

Perhaps the crowning enterprise of his railroad career was the one whereby the northern railroads were brought into the very heart of the metropolis. From the New York legislature he obtained a charter permitting the construction of an immense depot on Forty-second street and Fourth avenue, with the use of the avenue as far as Harlem, for a series of viaduct or underground tracks for the Harlem, the Central and Hudson River, and the New Haven and Boston lines. On the construction of these tunnels, bridges, and viaducts $6,500,000 was expended; a hundred and fifty trains passed through or over them daily, the entire work being considered a marvel of engineering skill.

If by his railroad ventures Mr Vanderbilt more than doubled his immense fortune, it was because he had the perception and skill to detect and make such changes as were needed in railroad management, and possessed the means wherewith to make them. Observing that a number of lines were struggling for existence

under the most adverse circumstances, and under various managements, he consolidated them, and thus made to pay as a whole roads which could not be worked singly at a profit. This, with his rare financial ability, and with a capital of from $30,000,000 to $40,000,000 at his command, he could easily accomplish without taking risks and without any gambling in mere certificates of value. When asked the secret of his success, he replied on one occasion; "I pay for what I buy and only sell what I have got." And on another: "I never tell anybody what I am going to do until I have done it."

No less remarkable than his success was the ease with which he superintended his vast and manifold affairs. Though an early riser, it was not until ten or eleven o'clock that he reached his office at West Fourth street, where, with the aid of a single clerk, he transacted in an hour or two the entire business of the day. The routine of office work he could not tolerate, always leaving it to men whom he could trust, and of whom he required only the net results, keeping his personal accounts in a book which he carried in his pocket, or more often keeping them in his head, but always managing them without apparent effort. Letter-writing he also disliked, though in dictating a letter he had few equals. If among his despatches there were any that contained more than a dozen lines, he would toss them impatiently to his clerk, saying; "Here, see what this man is driving at and tell me the gist of it." Money he never kept on hand to any considerable amount, investing it within a day or two after it was received, and making his arrangements beforehand so as to get from it all that it would earn. Like other millionaires of his day he did not despise small economies, and the same man who expended half a million in a yachting excursion would group into one a score of stock certificates in order to save a stamp tax of twenty-five cents. His business over, he left it strictly in the

office, never allowing it to interfere with his recreation, which consisted mainly of an afternoon drive behind the fastest team in New York, and in the evening a game of whist at one of the three clubs of which he was a member.

Looking back on his career, Mr Vanderbilt remarked one day, not with the vain-glorious boasting of a purse-proud millionaire, but with a just and becoming pride: "I have made on an average a million dollars every year of my life, and each million has been worth at least three millions to the people of the United States." All this and more was true. On retiring from the shipping business, instead of placing his $30,000,000 or $40,000,000 at interest, and remaining content with the income, he looked around him for some investment that would benefit his country, and this he found in the railroads of his native state. He found them crippled by the war, by speculation and bad management, and piecing together the shattered and isolated fragments, he equipped them anew, furnished them when needed with new road-beds and new rolling-stock, reduced their rates, increased their traffic, and by various improvements brought his system to a foremost place in the locomotive traffic of the world. His main line was nearly a thousand miles in length, representing with its branches a capital of $150,000,000, of which he owned in person more than one-half.

Now over four-score years of age, Mr Vanderbilt was still a noble specimen of physical and intellectual manhood. Tall in stature, but erect as a grenadier, and in carriage stately and dignified, his eye was still bright and clear, his step elastic, and in his fine and expressive features were but few traces of the touch of time. With his eleven children and his thirty-three grandchildren gathered around him, he looked like one of the patriarchs of old, and a patriarch indeed he was in the commercial world, one who had

accomplished more than any living man, and still went on accomplishing, refusing to stay his hand until death confronted him.

In May 1876 he was seized with the last and only serious illness of his life, or rather with a complication of ailments, to which his iron constitution long refused to yield. All through this centennial summer, autumn, and far into the winter he did battle with the foe. More than once his life was despaired of, the pulse growing feeble, the extremities cold, and the heart almost ceasing to beat. Still he rallied, even when the physicians had declared that his hours were numbered, and when all the family had bid him, as they thought, a last farewell. But at length came the end. After recovering from a severe relapse, on the afternoon of the 3d of January he was wheeled into the sitting-room, which for months he had not been allowed to visit, and at the time appeared in excellent spirits. Returning to his chamber he rested quietly until two in the morning, when a change for the worse occurred. A few hours later he passed away, peacefully and almost painlessly, surrounded by his descendants to the third generation, on all of whom he invoked the blessing of him before whose tribunal he was about to appear.

Of the enormous fortune bequeathed by Cornelius Vanderbilt, amounting to more than $100,000,000, nearly $90,000,000 were left to his eldest son, and one-half of the remainder to his heirs, but with ample provision for his wife, his remaining children, and certain of his relatives. By some it was remarked that in his will nothing was set aside for charities; but these he did not neglect in his lifetime, among them being an endowment of $1,000,000 for the Vanderbilt university at Nashville. A promiscuous alms-giver he never was, believing that hap-hazard charity creates more paupers than it relieves, that to solicit such charity is merely an attempt on the part of the idle and extravagant to live at the expense of those who

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Wm H Vanderbilt

are industrious and economical, and that the only way to help such men is by teaching them to help themselves.

Mr Vanderbilt was twice married, first, at the age of nineteen, to Miss Sophia Johnson, a woman of strong and noble qualities, and like himself of simple tastes and habits, one whose happiest days were spent in the Staten island home which her husband built, and in the company of the thirteen children whom she bore to him. A year or two after her decease, which occurred in August 1868, he took for his second wife Miss Frank A. Crawford, a southern woman of rare physical and mental attractions, handsome, refined, intelligent, and graceful. Says Doctor Deems, who was for many years his spirtual adviser, "the religious germ implanted in his youth was to be developed under the kindly cultivation of a younger nature, strange to his antecedent career. It was the mission of his second wife to develop the intrinsic goodness of his soul, and to inspire the benevolent deeds that crowned his later years."

And now from the career of Cornelius Vanderbilt, let us turn to that of his eldest son, who proved himself in all respects a most worthy successor to him whose fortune he inherited, and whose enterprises he carried to a still more perfect fruition.

William Henry Vanderbilt was born at New Brunswick, in the state of New Jersey, on the 8th of May 1821. For several years he attended the district school, and later the Columbia grammar school, New York, where at seventeen he completed his education. At eighteen he began life as a clerk in the banking house of Drew, Robinson, and company, of which the senior member was Daniel Drew. As yet he had given no proof of the great qualities that distinguished him in after life, and by his father was regarded as a youth of no very special promise. But for that very reason he set to work with the greater

energy, toiling from morning to night, rapidly mastering the details of the business, and thus recommending himself to the favor of his employers. That he did so is sufficiently proved by the rapid increase in his salary from $150 the first year to $1,000 in the third, and by the prospect of a partnership which, if not actually promised, was certainly in contemplation.

Meanwhile he had married the daughter of the Reverend Samuel Kissam, clergyman of a reformed Dutch church in the suburbs of Albany. The choice proved in all respects a most fortunate one, and for five and forty years he found in her who shared his lot a blessing greater than all his riches. As yet, however, he was anything but rich; for his salary was something less than $20 a week, and on this they lived for a time at a boarding-house on East Broadway.

But it was not as a banker that William was destined to make his mark in life. His health, at best somewhat delicate, had been seriously impaired by long confinement to the desk, so that his father was warned by the family physician that, unless he were removed from the bank, he would probably sink into an early grave. Thereupon the elder Vanderbilt presented to his son a farm of seventy acres of level land on the southeast shore of Staten island, without stump or stone, but with a soil of thin, sandy loam, requiring the most thorough tillage and fertilization. Here for more than twenty years the young couple lived, in a plain two-story house, resembling somewhat the Stapleton homestead which for three generations had been the home of the Vanderbilts.

It was not a munificent gift for a millionaire to bestow on his eldest son by way of a start in life, but it was better than nothing, and William settled at once on his little estate, determined to make the best of it. And here a word may be said as to the apparent want of natural affection on the part of the elder Vanderbilt, a want more seeming than real,

though a hundred times cast at him as a reproach. Brought up as he had been in the school of adversity, toiling without cease, and saving every dollar that he could spare, his early struggles had tended to harden still further his strong and self-reliant nature. "Let others do as I have done," he said; and as for his own sons he considered that better than anything he could give them was the opportunity for work, for earning their own livelihood as soon as they were able, no matter how severe and distasteful the task. "If a boy is good for anything," he remarked, "you can put him down anywhere and he will make his living and lay up something; if he can't he is not worth saving, and you cannot save him. Such was his maxim, and this he applied to his own children no less than to others, believing that labor, hard, honest labor was the surest panacea for the evils with which youth is beset.

From the first William was resolved to make a success of farming, and in that resolve was the surest presage of success. "Few men of his age," remarks the New York *Times*, "would have had the courage to leave a banker's desk to grapple seriously with the responsibilities and difficulties of such an undertaking, and still fewer would have overcome the obstacles and succeeded; but his motto was, never to attempt what he could not do, and never to fail when work would win. The morning sun greeted him in the field, and the setting sun left him there. He was among the first to begin work and the last to leave it; he directed the whole, but permitted nobody to do more labor than himself. The result was that the wastes and barrens of the little farm were soon transformed into a blooming garden, and Mr Vanderbilt's seventy acres soon began to return him a goodly income."

Further to improve his estate and to enlarge its area, capital was needed, and of this he had none at his disposal. An application to his father for a loan of $5,000 was refused; whereupon he mortgaged his

farm to a neighbor for $6,000, enlarging his house and purchasing nearly three hundred acres of adjoining land. But news of this transaction came to the ears of the commodore, who presently called on his son, and during an afternoon drive lectured him sharply on his improvidence. The latter replied that he had only done what he was compelled to do in order to make the best of his farm; that the mortgage would surely be paid off when due; that he had always tried to please his father, and would never again ask him for money. The next day he received from him a cheque for $6,000, and thenceforward there was a marked change for the better in the attitude of his sire, who began to appreciate the manly and self-reliant qualities which he had thus far grievously underrated.

During the war William made money rapidly, disposing of most of his produce to the commissariat department at Camp Scott, then the headquarters of General Sickle's brigade. When finally he abandoned farming and removed to New York, his income was at least $12,000 a year; his farm was considered the best, or at least the best conducted in all the island, and the old farmhouse had been replaced by a country villa, with its tower, piazzas, bay-windows, and all the adjuncts of the Italian style of architecture. Here were passed the happiest years of his life, and here were born his eight children, two of whom, Cornelius and William K. Vanderbilt, were destined to play an important part in the railroad world.

But several years before the war William Henry Vanderbilt began his railroad career. Mainly through his efforts the Staten island line was built, skirting the shore eastward from Vanderbilt's landing; but through gross mismanagement it had become so embarrassed with debt that it was necessary to place its affairs in the hands of a receiver. Less for the reason that the elder Vanderbilt was one of the

largest stockholders, than for the confidence inspired by the ability of his son, the appointment was offered to the latter, and at once accepted, though as yet he had no experience in the control of railroads. Here was the inception of a career which has made his name a household word wherever the whistle of a locomotive is heard. Here in this little island road, without means or credit, and almost without organization, was the graduating school of one of the greatest railroad managers of the age.

The receiver brought to bear on his task all the resources of his energy, working as he had never worked before, and that with a method and business aptitude that astonished the directors; none more so than his own father, who was now convinced that he had entirely underestimated the qualities of his son. By the most rigid economy, by developing new resources of patronage, and by establishing a separate ferry-boats connecting the road with New York, he gradually began to pay off the claims. Within two years the company was free from debt and on a sound financial basis. Then in recognition of his services Mr Vanderbilt was elected president, and so skillfully did he conduct its affairs that from being absolutely worthless the stock rose within five years to $175 a share.

But the recognition which he prized more than any other was that of his father, and of this a special token was now to be given. After a trip to Europe, to see his brother, George, a captain in the Union ranks, who died from the effects of exposure and hardship in 1864, he was appointed vice-president of the Harlem railroad, and in the following year of the Hudson River company. In both he became the chief executive officer, carrying to a speedy and successful issue the far-reaching plans which the master mind had conceived. Becoming thoroughly familiar with the details of his business, he gave to each department the most careful supervision, repairing the

track, building new stations and new rolling-stock, increasing the service and the speed, discharging incompetent or superfluous officials, and all this with the closest attention to economies whose items might be small, but whose aggregate was large. Thus the two lines, afterward consolidated as the Harlem and Hudson River railroad, enjoyed such a season of prosperity as had never been witnessed before. "I always told William," remarked Vanderbilt the elder, "that if these two roads could be weeded out and made ship-shape, they would both pay dividends." That they did so was due no less to William's careful management than to the financial combinations of his father.

And now Mr Vanderbilt was in the fullest sense of the word a railroad man, and with a career before him, the greatness of which none could as yet foresee. In truth he was not slow to seize on that career and prove himself master of his opportunities. If he did not possess all of his father's originality and boldness of enterprise, he was greatly his superior in method and organization. In routine work there was no comparison between them, and in close attention to details the younger Vanderbilt was probably without an equal. Not that his duties were confined to mere routine, for now the commodore found a most valuable colleague in the son whom he had so long depreciated. From being a mere agent he became his father's confidential adviser, and without his approval nothing of importance was undertaken. Thus when a controlling interest was acquired in the New York Central, William suggested that for convenience and facility of traffic, a continuous line should be established between New York and Buffalo, and that under a single management. Hence the consolidation in 1869 of the Central and Hudson River companies, forming at that time the most powerful railroad corporation in the United States. To manage this road, running as it did through the

richest state in the union, and affecting more or less innumerable interests, required the very highest order of ability, and for this purpose none could be found so well qualified as William Vanderbilt, who, in the articles of incorporation, was named as its vice-president and chief executive officer. Nominally under his father's supervision, but mainly on his own judgment, and certainly under his own direction, he so administered its affairs that within a few years the value of its stock was trebled, and the New York Central and Hudson River became one of the most valuable railroad properties in the world.

When called by his father's death to the management of the Vanderbilt system he had made himself perfectly familiar with the practical working of all its manifold departments. There was not a nook or corner of that system which he had not penetrated, and to which he had not given his personal supervision. Every contract he had revised; every voucher he had checked, and every item connected with construction, equipment, and traffic had come under his inspection. He had attended to the purchase of rails and ties; he had carefully examined the road-beds and the rolling-stock; he had kept his eye on the employés, on the ticket-office, on the printing office; he had stopped all waste in the repair-shops, and with the result that a vast improvement was wrought in the effectiveness of the roads. Though averse to office work, he labored unceasingly at his desk, answering his own correspondence, keeping, as far as possible, his own accounts, and, though surrounded by men whose fidelity had been attested by years of service, attending to a hundred details which others would have entrusted to subordinates. All this he accomplished by a perfect system of organization, and by using to the best advantage each working hour in the day. "How is it," men asked, "that Mr Vanderbilt finds time to do so much?" He did not find time; he made it.

Except that Mr Vanderbilt was now president of the several companies instead of being their vice-president, his conduct of affairs was not materially changed. He at once set to work, first to secure and then to increase the $90,000,000 of property which his father had bequeathed to him. If possible he worked harder than ever before, under the pressure of increased responsibility, leaving nothing to chance and as little as possible to the management of others, insisting always on a strict accounting for every dollar that was disbursed, and regarding his millions as a trust, if possible to be enlarged, but certainly to be guarded from risk. With this in view, one of his first measures was to make such arrangements with competing lines as would put an end to the railroad war caused by the cutting of rates. And here his policy differed essentially from that of his father. Instead of compromising with his rivals, the elder Vanderbilt would have crushed them, so extending his system as to make all others subordinate, to reduce them to the rank of local roads. But not so with Vanderbilt the younger, who was never happy in the midst of strife and especially of railroad strife. He would hold his own; he would push his system to the best of his power by all lawful and honorable means; but above all things he wanted peace.

The magnitude of the task which Mr Vanderbilt had now assumed can only be appreciated by those who are familiar with railroad operations. On the New York Central alone there were in 1881 at least 15,000 employés, with 23,000 freight cars, 600 passenger cars, more than that number of engines, and on parts of the road with sixty trains passing each other daily. In addition to the lines already mentioned he had been appointed president of the Michigan Central, the Lake Shore, and the Michigan Southern, and was largely interested in telegraph and telephone lines, in electric light companies and other prominent enterprises.

In 1885 the Vanderbilt system, including the roads which it controlled, extended from New York southwestward to St Louis, northward and westward to Buffalo and Chicago, and from Chicago into many of the most recently settled regions east of the Rocky mountains. In the state of New York its lines ran on both sides of the Hudson, from the metropolis to Albany, and thence through the Mohawk valley to Buffalo. From Buffalo the system was continued to Chicago, skirting both shores of Lake Erie, the so-called Nickel Plate road, a competing and parallel line, being purchased and consolidated with the Lake Shore company. Between 1877 and 1880 the Chicago and Northwestern, with its four thousand miles of track, passing through some of the richest grain and grazing lands in the western states, and connecting at Council bluffs with the Union Pacific, passed under the control of Mr Vanderbilt. Finally he was at this date the ruling power in the Western Union telegraph company, resigning his directorate, as did his friends, in the autumn of 1880, when, through a consolidation of interests, Jay Gould was placed at the head of its affairs.

Meanwhile, to change in a measure the character of his investments, and to protect at least a portion of his vast estate from all possibility of loss, he had made one of the largest transfers of railroad stock ever recorded in the world. In November 1879 he disposed of 250,000 out of his 400,000 shares of New York Central to a syndicate representing mainly the Wabash system, but including also a number of foreign capitalists. At $120 a share, the price agreed upon, he realized exactly $30,000,000, and this sum he placed in government bonds, soon afterward increasing the amount to a total of $53,000,000. As he remarked to a friend who advised him on the matter, a revolution had occurred in the railroad world since the death of his father; he was nearly sixty years of age and could not much longer remain

at the head of affairs; it would be far more difficult for his sons to conduct the great railroad system than it had been for himself. Moreover, he would now be less subject to the public distrust which, however undeserved, is inseparable from one who wields enormous power.

In 1881, though in the midst of another great railroad war, the story of which need not here be related, he transferred to his sons the more arduous portion of his duties, intrusting to Cornelius the financial administration, and to William Kissam the practical management. Some two years later, on the 4th of May 1883, he resigned the presidency of the several companies with which he had been so long associated. "Gentlemen," he said in the simple and dignified address which accompanied this voluntary surrender, "the companies of which I have had the honor to be president for many years past are now about to elect new officers for the ensuing year. The meetings of all of them have been called at this office at this time to thank you as the directors and officers, and also the shareholders of the several companies, for the confidence they have always reposed in me as their president. It is my belief that these corporations are all in a sound condition, and that all the prominent positions in them are filled by gentlemen who understand their duties, and who will discharge them to the satisfaction of stockholders. This fact has had great influence with me in determining the course of action which I have, after due deliberation, decided upon.

In my judgment the time has arrived when I owe it as a duty to myself, to the corporations, and to those around me, upon whom the chief management will devolve, to retire from the presidency. In declining the honor of reëlection from you, I do not mean to sever my relations, or abate the interest I have heretofore taken in these corporations. It is my purpose and aim that these several corporations

shall remain upon such a basis for their harmonious working with each other, and for the efficient management of each, as will secure for the system both permanency and prosperity. Under the re-organization each of them will elect a chairman of the board, who, in connection with the executive and finance committees, will have immediate and constant supervision of all the affairs of the companies, and bring to the support of the officers the active assistance of the directors. The plan of organization now adopted and inaugurated will remove the business of the companies from the contingencies of accident to any individual, and insure continuance of the policy which has heretofore met the approval of the stockholders."

Complimentary resolutions were passed by the several boards, and on the following day Mr Vanderbilt sailed for Europe, accompanied by his son George, and his uncle Jacob. For several years his health had been failing under the terrible load of his responsibilities, the tremendous pressure of his work, from which his only relief had been an occasional trip across the Atlantic, returning by the same steamer, to renew his Antæan labors. He had not in equal degree the faculty which his father possessed of leaving behind him the cares of business, of transacting business rapidly and without apparent effort, of placing upon others the greater portion of his burden. Hard and incessant toil, first as a necessity and then as a habit, had been his lot from boyhood, developing still more completely the practical nature which was already his by inheritance.

And yet, during his earlier travels, he developed and cultivated tastes for which few gave him credit. Of this we have evidence in the mansion and art gallery which he erected on Fifth avenue, not only the most costly but also the most elegant structure in that suburb of palaces. The picture gallery, stocked

with a choice collection, valued at more than $1,000,000, was to the west of the main hall, 32 by 48 feet, and with a sky-light 35 feet above, of tinted and opalescent glass. The floor was inlaid with Santo Domingo mahogany, and the pilasters were of the same material, the former bordered with a mosaic of marble. Above the wainscoting were curtains of dark red tapestry, and in the western wall was a mantelpiece of African marble. Here were given art receptions, invitations to which were in eager request by connoisseurs and by the élite of New York society.

Says one of his most intimate friends: "I have known a great many picture buyers in my time, but I have never known one more modest in this particular than Mr Vanderbilt. I think his ambition was to use his love of pictures for the public good. He certainly made the collection with the intention that it should never be separated, and that it should be for the public use. He was most liberal in opening his house to the public, and some days as many as 3,000 visitors were admitted. He continued this until his privacy was endangered and it became a nuisance to his family."

The practical common sense which Mr Vanderbilt brought to bear on his business transactions he displayed in all his relations in life. Although he was acknowledged as one of the most successful men in the world, and was certainly the richest man in the world, he was entirely free from the vulgar ostentation which too often accompanies the possession of wealth. "Once, in Paris," says the friend whose words I have quoted, "a French nobleman of the Bonaparte family had written to Mr Vanderbilt that he wished to sell his collection of Sévres china, Louis XVI furniture, a Marie Antoinette table, and numerous articles of *virtu*. After considerable pressure had been brought to bear we went to his house and saw them. When we came outside, Mr Vander-

bilt said: 'You are supposed to know all about these things and their intrinsic value, and you know of the associations connected with them; but I do not, and I am too old to learn. If I should buy them and take them to New York and tell my friends that such a thing belonged to Louis XVI or to Marie Antoinette, or to Madame Pompadour, and should relate all the other things which make them valuable, I should be taking them from a field where they are appreciated to a place where they would not be. Perhaps I myself should know less about them than anyone else. It would be mere stupidity for me to buy such things and to show them to people to whom I should have to confess my ignorance of the qualities that made them valuable.'

"He was never ashamed to acknowledge, with the utmost frankness and simplicity, his former straitened circumstances in life. I remember one incident illustrating that. I went with him to Boucheron, the famous dealer of the Palais Royal, Paris, to see a picture by Troyon, representing a yoke of oxen turning to leave the field after leaving the plow. Connoisseurs spoke very highly of it, but took exception to the action of the cattle, and said it was forced and unnatural. Mr Vanderbilt remarked, 'Well, I don't pretend to know anything about the quality of the picture, but I do as to the action of the cattle. I have seen them act like that a thousand times.'"

With all his millions it is probable that Mr Vanderbilt was never so happy and well content as when on his Staten island farm. For the first few years of his residence in the metropolis, a Sabbath visit to his former home was his favorite and indeed his only recreation, and in time even this was discontinued, under the pressure of care and work. Gradually his health began to fail; his appetite was gone; his sleep was broken. He consulted his physicians frequently, and his anxiety was increased by a slight attack of paralysis, from which, however, he soon

recovered. "If I can only out-live my sixty-fifth birthday," he exclaimed, "that seems a critical age for our family." And so it proved for himself.

The end came suddenly. On the 8th of December 1885, he was discussing with Mr Robert Garrett, the president of the Baltimore and Ohio railroad, a project for a new line into New York by way of Staten island. The two were seated in Mr Vanderbilt's study, the millionaire in his favorite easy chair, on his left a table covered with papers, and in front his visitor. As the latter was unfolding his plans, Mr Vanderbilt leaned forward in a listening attitude, at intervals making a few suggestions. Suddenly the muscles of his mouth began to twitch convulsively, and his frame was distorted, as though with a spasm of pain. A moment later, without a struggle or a sound, he fell headlong to the floor. A stroke of apoplexy had done its work instantly and almost painlessly, as he had always wished should be his end.

In a mausoleum built some years before, near the old Moravian cemetery on Staten island, the remains of William Henry Vanderbilt were laid at rest. The funeral was of the simplest, in keeping with the tastes and habits of the deceased. On the third day after his decease the members of the family assembled around the plain cedar coffin, draped in broadcloth and lined with satin, where lay his remains. When all had taken their farewell look, the lid of the casket was closed, and slowly the cortege moved through the crowded streets to St Bartholomew's church, where without eulogy or comment the burial service was read. Then the procession went on its way to the spot where the ferry-boat was in waiting, the same one which ten years before had conveyed his father's corpse to the same destination. Once more the steamer, crowded with mourners, put forth into the stream, and from the scenes of his labors the remains of the mil-

lionaire were carried to the island home where he had passed so many happy years, and where was now to be his final resting place.

While apoplexy was the immediate cause of his death, the real cause was anxiety and overwork, resulting finally in arterial changes which brought about the rupture of a blood-vessel on the brain. In one year he did the work of half a dozen years, and almost from the day he took charge of his father's affairs his health began to decline. By nature he had been gifted with a strong constitution, a sturdy frame, and a vigorous physique; but as he himself remarked, "the care of $200,000,000 is too much for any brain or back to bear." Certain it is that his end was not hastened by any form of dissipation or excess. On the contrary he was a man of extremely simple and abstemious habits. He used no tobacco in any form, nor any strong drink, except on rare occasions. He ate but little meat, and his diet was of the plainest, his favorite dishes being of shell-fish and cereal food in some coarse shape, the latter taken with milk. His only recreations were his afternoon drive, an occasional visit to the opera, and an evening rubber of whist, at which he was a constant and skillful player. His domestic life was worthy of all praise, and in his relations as a husband and a father no man was more thoughtful and indulgent. No matter how severe the pressure of his business, he always found time to minister to the happiness and welfare of wife and children, and that must indeed be an urgent matter which would call him from his home after nightfall. The most cordial of hosts, he entertained his friends in princely fashion, and yet without the slightest trace of affectation or display. Though not a brilliant speaker, he was fluent and vigorous in conversation, abounding in humor, and with the keenest appreciation of a joke. Among all the millionaires of the metropolis there was no more popular man,

and there were none so well fitted to carry to a successful issue the great work which his father had begun.

Many were the tributes paid to his memory, not only by his associates, but by those who a few years before had been his rivals and antagonists. By the directors of eleven railroad companies a memorial was drawn up, the day after his death, from which the following are extracts:

"His sudden death, in the very midst of the activities whose influence reached over the entire continent, has startled the entire country, and in the hush of strife and passions the press and public give tender sympathy to the bereaved family, and pay just and deserved tribute to his memory. But to us who were his associates and friends, endeared to him by the strongest ties and by years of intimacy, the event is an appalling calamity, full of sorrow and the profoundest sense of personal loss, while officially we feel that his sagacity, his strong common sense, his thorough knowledge of the business, his willingness to lend of his vast resources in times of peril, and his counsel and assistance, were of invaluable service in conducting and sustaining these great enterprises.

"He came into the possession of the largest estate ever devised to a single individual, and has administered his great trust with modesty, without arrogance, and with generosity. He never used his riches as a means of oppression, or to destroy or injure the enterprises or business of others; but they constantly flowed into the enlargement of old, and the construction and development of new works, public in their character, which opened new avenues of local and national wealth, and gave opportunity and employment, directly or indirectly, to millions of people. In keeping together and strengthening, during a period of unparelleled commercial depression and disintegration, the combination of railways known

as the Vanderbilt system, which he inherited from his father, greatly extended, and transmitted to trained and worthy successors, he performed a work of the highest beneficence to the investors and producers of the whole country.

"With all the temptations that surround unlimited wealth, his home life was simple, and no happier domestic circle could anywhere be found. The loved companion with whom he began his active life in the first dawn of his manhood was his help, comfort, and happiness through all his career, and his children have one and all honored their father and their mother, and taken the places which they worthily fill in their several spheres of activity and usefulness.

"In performing this last and saddest of duties, we who were his associates, advisers, and friends, remember not the millionaire but the man. His frankness, his unaffected simplicity, his deference to the opinions of others, his considerations for the feelings of all, his tenderness in suffering and affliction, and his whole-hearted manliness, were to us precious privileges in his life, and are loving recollections in his death."

Said Russell Sage, one of the ablest of business men and himself a millionaire: "Mr Vanderbilt was a very remarkable man, of far more original force and financial ability than anyone imagined when he succeeded to his father's millions. If he had not the genius of the commodore, who was to finance what Shakespeare was to poetry and Michael Angelo to art, he was certainly a most able successor. He doubled the colossal fortune that was left him, and that proves an executive skill that only one man in a million possesses. I have had more or less to do with him, and the three qualities I observed as most striking in his character were his readiness, his reliability, and his courage. That is to say, he always met an emergency with a plan; he

always kept his word to the very letter, and he possessed such a fund of decision and persistance that, having undertaken to do a thing, and having made up his mind how it was to be done, he went right ahead and carried it through on the lines he had laid down. I think that his rare success in manipulating his great fortune was due to these qualities."

To the same effect spoke Jay Gould, for many years his rival; and thus Isaac P. Chambers, controller of the New York Central; "I acted as the private secretary of Mr Vanderbilt in connection with the auditor's duties from 1865 to 1883. During all these eighteen years I was never farther away than in the next room to his, and I never saw a man of more amiable disposition. He was not understood by the public. He thought of their interests in every respect, and in considering any new movement or change in policy, would say: 'We must look out for the public first, for you know that we are their servants.'"

Of the enormous fortune bequeathed by Mr Vanderbilt, estimated at nearly $200,000,000, $70,000,000 was invested in government bonds, $27,000,000 in railroad and other bonds, and the remainder in railroad shares and miscellaneous securities. Against $200,000 of expenses, his income amounted to $10,350,000 a year, to more than $28,000 a day, or $1,200 for every hour in the twenty-four.

The bulk of his fortune was left to his eight children, each of whom was assigned an equal share in securities valued at $80,000,000. Their names were Cornelius, William K., Frederick W., George W., Margaret Louisa, Emily Thorn, Eliza O., and Florence Adele. For his wife and other relatives ample provision was made, and at least $1,000,000 was set apart for various trusts, annuities, and charities, among which were bequests to religious and scientific associations, with one of $200,000 to the Vanderbilt university at Nashville. To this institution he

had already presented, during his lifetime, $100,000 for the founding of a theological school. Others of his public benefactions were also on a princely scale, as the one of $100,000 in 1880, for removing the Egyptian obelisk to Central park, and of $500,000, a year before his death, to the New York college of physicians and surgeons.

No less munificent were his private charities, although their extent was never known except to himself and the recipients. Too well remembered to require special notice is his offer to cancel the mortgage held on the property of General Grant, and when this offer—twice refused—was accepted only on condition that he receive in payment the trophies gathered in the general's tour around the world, he at once presented them to the nation. Not least among his generous deeds were the gifts which he made some three years after his father's death of $1,000,000 to his brother Cornelius, and of $500,000 each to his sisters, carrying the bonds in his carriage to their several residences, and distributing with his own hands this munificent largess.

To his sons Cornelius and William Kissam was left the remainder of the estate, amounting to nearly $100,000,000 after all bequests had been fulfilled. Both were, therefore, well prepared to continue the administration of the Vanderbilt system, and to keep it under their control. From being first assistants they had become associates in all his railroad enterprises, Cornelius as first vice-president at the head of the finance department, and his younger brother as second vice-president and chief of transportation. While their duties were arduous, they had been trained to work, and both were able, energetic, and conservative, with the conservatism which, in the railroad world, is the natural result of experience. Though differing somewhat in habits and characteristics, they formed together a strong combination, each one being, as it were, the supplement of the other.

Born at his father's Staten island farm, on the 27th of November 1843, Cornelius, after receiving a thorough academic training, began life as a clerk in the Shoe and Leather bank of New York city. Here, though the favorite grandson of the richest man in the United States, he was treated in all respects as were the other employés, with similar duties and under the same control. Meanwhile, his conduct was being closely watched by the commodore, who had determined that, before being placed in a more responsible position, he should first give proof of his diligence and self-reliance. Preferment came rapidly, for he was a capable youth, faithful in the discharge of his duties, and never missing an hour at his desk. Said the president of the bank in later years: "I do not now see much of Mr Vanderbilt, as our paths lie apart, but when he was here he was, I think, the most single-minded and conscientious worker I ever saw. He was not merely honest—most bank clerks are that—but he was exceedingly precise, and worried if a cent were missing in the accounts. He was thoroughly fair-minded too, and always did exactly as he agreed, showing in every way not only a careful bringing up, but a kindly nature."

At the age of twenty he was transferred to the banking and brokerage firm of Kissam brothers, in order to obtain a better insight into the business for which his grandfather intended him. A year later he entered the treasurer's office of the New York Central, and here he remained until, on his father's succession to the presidency, he was appointed, as I have said, vice-president, and placed in charge of the finance department. And here it may be mentioned that, on the death of his grandfather, the recognition accorded to Cornelius in his will showed that he was deemed competent to assume in due time the administration of the vast affairs with which the family name was connected. Trained under the personal influence of the commodore, he had acquired in a

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measure the qualities that had led to his success; add to this his father's guidance and counsel, and the result was a man of excellent business habits and business education, one keeping himself under perfect control, and well fitted to take control of others. On assuming the financial management of the New York Central, he bore easily and lightly the burden laid upon him. He showed indeed a special aptitude for the position, not only by the clearness and accuracy of his statements, but by his intimate knowledge of the company's condition, which enabled him to respond at any moment to the questions put to him concerning its affairs. Thus he rapidly became known to the business world, and won the confidence of all the banking and mercantile firms whose interests were identified with those of the Vanderbilts.

After their father's death Cornelius and his brother inaugurated what was then a novel system of railroad management, whereby the supreme authority was vested in a board of control, to which even the president was subject. Under this arrangement he was appointed chairman of the New York Central and Michigan Central boards, with James H. Rutter as president of the former, succeeded, after his death, by Chauncey M. Depew. The Vanderbilt roads with their affiliated lines were then extended westward almost to Salt Lake city, covering indeed the entire northwest, and including, besides those already mentioned, the West Shore, the Cleveland Columbus Cincinnati and Indianapolis, the Indianapolis and St Louis, and the Chicago St Paul Minneapolis and Omaha. In every part of this vast system was felt the influence of Cornelius Vanderbilt, and without his advice and consent nothing of importance was undertaken. His skillful and conservative management, without fear or favor, and simply in the interests of the stockholders and the public, gave to that system a prestige which it had never before enjoyed. Like his father, he was quick to reward faithfulness and zeal

among his employés, and none were more respected by the vast armies of men who called him chief. But in matters of discipline he was rigid and unyielding, insisting on promptitude and alertness in a vocation where human lives depended on a strict discharge of duty. In the railroad wars and railroad strikes which of late have been of such frequent occurrence, he has adopted a firm but conciliatory attitude, and perhaps his firmness and decision were never more clearly displayed than during the strike which occurred on the New York Central during the summer of 1890. Well it was that at this juncture a competent man was at the helm, one qualified by his ability and experience to confront the threatened danger, and to put an end to the confusion in which for a time the company's traffic was involved.

As a proof of the interest which he felt in the welfare of those who served him, may be mentioned his donation to the employés of the New York Central of a club-house on Madison avenue, a handsome and commodious structure, with library, reading-rooms, class-rooms, gymnasia, bath-rooms, and bowling alleys, with a spacious hall for public meetings, and with sleeping rooms for those whose duties detained them late into the night. In a letter dated June 30, 1886, expressing the directors' appreciation of this appropriate gift, the president remarks: "While you could not be fairly called upon any more than other individual stockholders personally to incur this expense, in doing so you perpetuate in a way most honorable to yourself and beneficial to the company a name already identified with the management of this corporation and its affiliated lines during two generations. Individually I am deeply sensible that this work will lighten the burdens of the administration of the company's affairs, and promote that good feeling and mutual and interdependent interest between the executive and all departments of our business, which, increasing with years, will furnish

more acceptable service to the public, and add to the value of the property."

To the calls of philanthropy and benevolence, to hospitals, charities, and churches, to scientific and educational institutions, Mr Vanderbilt has devoted no small portion of his scanty leisure and his ample means. In 1890 he was connected with at least a score of such associations, and if he refused to connect himself with others it was because, in accepting such offices, he deemed it his duty to give to them his personal attention, and this his time did not permit. How often he has tided over their ever-recurring financial difficulties will never perhaps be known; but by all who were allied with him in such good works his assistance and advice were ever welcomed and appreciated.

Like most of the Vanderbilts, Cornelius married young, the lady of his choice being Miss Alice Gwynne, the daughter of one of the most prominent lawyers of Cincinnati. The union has proved in all respects a happy one, and not least among the blessings were the aid and sympathy which Mrs Vanderbilt so readily accorded to her husband's labors in behalf of his fellow-man. They have a family of six children, the eldest, William H., being a member of the class of '93 at Yale University. Within recent years Mr Vanderbilt has withdrawn in a measure from the more onerous duties of his position, avoiding as far as possible all friction and nervous waste, and deputing to others the care of such matters as needed only to be supervised. At his Fifth avenue mansion, tastefully furnished, and containing one of the choicest of libraries and art collections, or at his country seat at Newport, where are all the appliances for comfort and healthful recreation, his leisure time is passed in the company of his wife and children, his books and pictures, and at times of a few chosen friends. Now in his forty-seventh year, his appearance resembles closely, except

for the difference of age, the well-known portraits of the commodore, with the same bright eye and the same massive, intelligent, and clear-cut features. As others said of his father, men regard not the millionaire but the man, and neither his wealth nor power have detracted in the least from the esteem which he has so long and deservedly enjoyed.

Thus, in as brief space as was consistent with the purpose of my work, I have described the career of the Vanderbilts, from the time when the commodore borrowed from his mother one hundred dollars, wherewith to purchase his periauger, to the day when his grandson, wielding his scores of millions, controlled the greatest railroad system on the face of the earth. By some these men have been decried as the despoilers rather than the benefactors of their race; but the number of their detractors is few, and now that the dust of battle is cleared away, and malice and prejudice are no longer at work, it is admitted that they have been the most enterprising railroad managers of the age, possessing rare administrative talent, and such a combination of abilities as the world has seldom witnessed.

Purely from an economic standpoint, it is indeed impossible to overestimate their influence for good on the condition of their fellow-man. To hundreds of merchants and manufacturers they have contributed directly of their wealth; to thousands they have contributed indirectly by opening up new avenues of trade; to scores of thousands they have given employment, and to millions they have afforded the means of cheap and rapid transportation, the benefits of a thoroughly equipped and organized system, extending from the shores of the Atlantic to the base of the Rocky mountains, and from the great lakes to the juncture of the two vast rivers whose united stream rolls southward to the gulf. Here we have one of the most striking examples which history affords of the boon conferred on mankind by the

acquisition and distribution of wealth. In these untitled princes are some of the dominant factors of the world, and some of its dominant benefactors, men who, while accumulating millions for themselves, have added tens of millions to the wealth of others, have circulated their capital among a multitude of toilers, and have renewed the sluggish arteries of commerce and finance.

When the owner of property which, if turned into gold, would represent at least $200,000,000, or 500 tons of solid metal, William H. Vanderbilt handled but little of his money. He never even saw it, and but the smallest fraction of it was at any time in his actual possession. Of the $10,000,000 or more of his yearly income he used only the fiftieth part, and of every hundred dollars that he possessed ninety-nine were at the disposal of others.

By their predecessors millions had been taken out of the roads which they controlled; but by the Vanderbilts millions were put into them. It was not theirs to destroy but to build up, to renovate and raise from their ashes the fragments of worthless properties, to consolidate parallel and competing lines, to re-equip them, to prepare them for the service of the public, and in so doing to cast upon the waters the bread which should return to them after many days. Such men are in the truest sense the builders of our commonwealth, setting in action a power for good, such as was never wielded by earthly monarch, and contributing more than monarch ever contributed to the welfare and happiness of mankind.

CHAPTER VII.

RAILWAYS—OBSERVATION TOURS AND DISCUSSIONS.

MAGNITUDE OF THE PROPOSITION INVOLVED—THE FIRST RAILROADS—WESTWARD-TENDING SPECULATIONS—TRAILS OF THE FUR-HUNTERS—GOVERNMENT EXPEDITIONS—PROJECTS AND PROPOSALS—DIVERSITY OF CLAIMS ADVANCED—SECTIONAL JEALOUSIES—RAILROAD CONVENTIONS AND PRINTED DISCUSSIONS—PREDISPOSITIONS AND PROGNOSTICATIONS—POPULAR IDEAS AND INTERESTS—ATTITUDE OF CONGRESS.

ONE cannot help being struck, in following the history of transportation, with the vast amount of means involved in it, which all the time grows greater. The labor, thought, and high purpose which has entered into this one branch of human endeavor is wonderful; it is worthy of intelligent contemplation from many points of view, one of the most surprising things about it being the progress made in a single quarter-century, from 1845 to 1870. This developement began with water transportation, almost altogether, and continuing until a yet more marvellous advancement was achieved on land.

The first railroad charter granted in the United States was by the legislature of Maryland to the company which constructed the railway between Washington and Baltimore, and which was operated by horse-power, the cars being of a plain and primitive pattern. In 1830 Peter Cooper built a locomotive at Baltimore weighing about a ton, which drew an excursion platform car at the rate of eighteen miles an hour, and was the first locomotive for railroad use ever constructed in America. But improvements rapidly followed, passenger transportation being carried on by steam in several of the states before 1840,

and before 1845 there were 2,278 miles of railroads in the United States.

The application of steam to land transportation solved a political as well as a commercial problem. It was the means by which the eastern and western borders of the republic might be bound together into one homogeneous commonwealth. By it time and distance were in a measure annihilated, a fact which was comprehended while yet the means of making it available were wanting.

With admirable foresight the United States government had considered the importance of road-making even before steam entered into the consideration of the question of transportation. It kept an intelligent watch upon those *traileurs* of the wilderness, the fur-hunters, and instituted a series of expeditions towards the Pacific, beginning with that of Lewis and Clarke, and followed in due time by others. Nothing like a road survey was attempted before 1825, when J. C. Brown, by order of the United States government, marked out a road from the western frontier of Missouri, near Fort Osage, to San Fernando de Taos, near Santa Fé, in New Mexico. The commissioners who with him conducted this expedition were Benjamin Reeves, George C. Sibley, and Thomas Mather. They followed a path already in use by fur-traders and others, extending along the divide between the Kansas and Arkansas rivers, known as the Santa Fé trail. It struck the latter stream near Plum Buttes, following up its valley to Choteau island, where it turned toward the Cimarron, which it followed eighty-seven miles; then bore off to Rabbit Ear creek at the head of the north fork of the Canadian, whence it continued west to the mountains near the source of the Ocalá river, and terminated at Taos. This route was elaborately surveyed with chain and compass corrected by observations for latitude with a good sextant, the work not being completed before 1827.

A survey similar to this was also made in 1826 by R. Richardson, from Little Rock in Arkansas, to Fort Gibson, in what was later known as Indian territory. In 1832 Lieutenant J. Allen, of the army of the United States, made a reconnaissance of the sources of the Mississippi. He was accompanied by Henry R. Schoolcraft, whose subsequent writings upon Indian languages and customs gave him a wide reputation. At the same time B. L. E. Bonneville, an army captain, led an expedition of adventurers to the Rocky mountains, adding somewhat to the limited knowledge of the public concerning the mid-continent, although he, like other "discoverers" followed the trails of the mountain men who were his guides.

Colonel Manny in 1833 left Fort Gibson with a company of Texan rangers, and proceeded westward as far as the head of Little river to learn something of the country, which Colonel Dodge with some companies of dragoons still further explored between the Red and Canadian rivers, about seventy miles west of the Wachita mountains. On this expedition General Leavenworth, and many officers and men, died of malaria fever, and the report was worthless, probably from this cause. Catlin, the artist, was a member of this expedition, and touchingly depicted the sufferings undergone by the troops.

In 1835 Colonel Dodge made a second reconnoissance, this time of the main Platte river, and its south fork to its source. Thence he proceeded to the Arkansas, and returned to Fort Leavenworth by the Santa Fé trail. Three years later C. Dimmock surveyed with chain and compass a military road along the western borders of Arkansas and Missouri, between forts Smith and Leavenworth. This was, I believe, the first military road in so western a part of the United States domain.

A foreigner named I. N. Nicollet, in 1838, having come to America in the interests of science, and to study the physical features of this continent, after

having explored the Alleghany range, and ascended the Red, Arkansas, and Missouri rivers for long distances, and explored the Mississippi from its mouth to its source, was invited by the war department and topographical bureau to make a report of his travels, after which he was employed by the government to explore the country west of the sources of the Mississippi. In this undertaking he was assisted by Lieutenant J. C. Frémont, the survey occupying two years. Nicollet was the first who made use of the barometer in obtaining the elevation of the plains above the sea, and his map was one of the most valuable contributions ever made to American geography.

About the same time, from 1838 to 1841, the land and naval expedition of Lieutenant Charles Wilkes in Oregon and California was made, adding much information to that already obtained concerning the Pacific coast from private sources. Following upon this, which was intended to supplement and complete it, were laid before congress the expeditions of Frémont in 1842 and 1843–4, now familiar to all the world.

In 1841 there was also an expedition of Texans under General McLeod to Santa Fé. It consisted of six companies averaging forty men each, and a large wagon train carrying merchandise. The chronicler of the expedition was one Kendall who accompanied it, and who tells us they left Austin June 21st, travelling north, crossing the Brazos at Big Timber, and turning westward to the Big Wachita, which they mistook for Red river, entering Llano Estacado, or staked plain, at the head of the main Red river. Here the force divided, one part under Colonel Cook taking the advance, and General McLeod following with the train. A company of pioneers sent forward by Cooke struck the Canadian at the Arroyo de Truxillo, and kept up the valley until they came into the Santa Fé trail, which brought them to Anton Chico, where they procured guides which were sent back to meet Cooke, and who led him by the way of

Tucumcari hill, "along the road generally pursued by immigrants," near the Canadian river, to New Mexico.

In the mean time the pioneers were arrested and imprisoned, Kendall with the rest, at San Miguel, and Cooke when he arrived was treated in the same manner by the suspicious authorities, while a force was sent out under the Mexican general Armijo, which captured General McLeod's command at Laguna, Colorado. Kendall's narrative gives an affecting account of the sufferings of this expedition from hunger, from Indian hostilities, and imprisonment by the Mexicans. It was believed that this party was the first to visit the sources of Red river, but of this there is no evidence, and the information furnished was of little value. In 1843 Captain N. Boone, of the United States Dragoons, commanded an expedition from Fort Gibson up the left bank of the Arkansas, to a point ten miles above Lower Red fork, crossing here to the right bank, and following it to the mouth of the upper Red or Big Salt fork. Thence the party travelled due west sixty miles to Big Salt plain, where it turned north to the Santa Fé trail, striking it on the headwaters of the Little Arkansas, whence it turned west to Walnut creek, and thence south to the Canadian, pursuing it down to the north fork, and from there to Fort Gibson. Boone committed the error of taking the Cimarron to be the source of the Red fork, and so representing it on his map. The same year Captain J. Allen led an expedition from Fort Des Moines to the source of the Des Moines river.

The government, which carefully sought information from any source, found a useful authority in *Gregg's Commerce of the Prairies, or the Journal of a Santa Fé Trader, during eight expeditions across the Great Western Prairies, and a Residence of Nearly Nine Years in Northern Mexico; Illustrated with Maps and Engravings; in 2 vols., 1844.* From these, an dall other sources which could be relied upon, maps of the country beyond the Mississippi were made for the use of

congress. A glance at them, however, reveals the frequent substitution of imagination for fact, and that notwithstanding these yearly expeditions, not much was known of the vast territory stretching from the Mississippi to the Rocky mountains, and from this axial elevation of the continent to the western ocean. What thus became known stimulated a desire for further information, and Colonel J. J. Abert, chief of the topographical bureau, ordered Frémont to the Pacific coast, where he remained long enough to take part in the conquest of California.

Lieutenant J. W. Abert, who was detached from Frémont's command in 1845 at Bent's fort, with instructions to explore Purgatory creek and the Canadian and False Washita rivers, in obeying instructions travelled down the Arkansas to Purgatory creek, and up that stream eighteen miles, where the cañons forced him westward to Timpa creek, which he followed to its head, and crossing a low divide came again to Purgatory creek, which following up to the Raton mountains in the present state of Colorado, taking the Santa Fé route through the Raton pass, he reached the sources of the Canadian, keeping down the stream to about latitude 35° 50′, and striking across to Utah creek, near its head, pursued it to its junction with the Canadian, which was followed to Valley creek, after which he took a southerly course to the north fork of Red river, believing it to be the False Washita. When he had followed the main river about seventy miles he turned northward again, and crossing the head branches of the False Washita reached the Canadian, down which he travelled to Fort Gibson, having completed a long loop in horseshoe form with its open end on the Mississippi river and its arc touching the great Rocky divide.

In 1845 W. B. Franklin, topographical engineer, made a reconnoissance to the South pass, escorted by Colonel Stephen W. Kearney, of the United States first dragoons. The expedition travelled the usual

immigrant route from the Missouri, and returning to Fort Laramie proceeded southward from the post along the Chugwater and Crow creeks to St Vrain's fort, and thence to the Arkansas below the mouth of Fontaine Qui Bouille, returning to Fort Leavenworth along the Arkansas valley and Santa Fé road.

A more important expedition was that of Major W. H. Emory, of the topographical engineers, who in 1846 conducted an expedition from Fort Leavenworth to San Diego, in California, his route including parts of the Arkansas, Del Norte, and Gila rivers. Leaving Leavenworth June 27, 1846, he followed the sweep of the Arkansas to Bent's fort, where he was joined by a column of the army of the west going out to hold our conquest in California, and thence proceeded south through the Raton pass and to the Pecos river, which he crossed at San Miguel, striking the Santa Fé trail at the head of Galisteo creek. From Santa Fé the army travelled down the Rio Grande del Norte 230 miles to Fra Cristobal, where the command divided, the wagon train taking a beaten road, while the troops crossed the dividing ridge "nearly on the 33d parallel," and taking a west course struck the Gila, which they followed, only making detours to avoid cañons, to its junction with the Colorado. This was the route afterward adopted by the immigration from the southern states to California. On the 5th of December Emory's command crossed the range lying between the interior and the coast by Warner's pass, arriving at San Diego on the 12th.

To Major Emory was due the marking out of a new transcontinental line. In his notes he gives a graphic description of that remarkable point, since become familiar to army men, and later to the travelling public, where the Gila and Colorado unite, and where the United States established a fort in 1850 called Yuma, after a local tribe of aborigines.

Writing on the 22d of November, 1846, he says: "The mountains rose abruptly from the plains, as they

mostly do in this region, resembling in appearance large dykes terminating at top in a sharp ridge, which a man could at any part straddle. They were of hard granite, pepper and salt colored, traversed by seams of white quartz. This spur gives the river Gila quite a bend to the north; and from that point to its mouth, which we reached at night, the river is straight in its general direction, but its course is crooked and dotted with sand-bars by incursions from the sand-hills which now flank both its sides. The sand is brought down by the winds from the valley of the Colorado. Its volume seemed, I think, a little diminished, probably absorbed in the sand. The day was warm, the dust oppressive, and the march, twenty-two miles, very long for our jaded and ill-fated brutes. Camp to-night in a little hollow encircled by a chain of sand-hills overgrown with mesquite."

Next day, the 23d, the record continues: "The junction of the Gila and Colorado due north from our camp, and about a mile and a half distant. The day was stormy, the wind blowing fiercely from the north. We mounted a butte of feldspathic granite, and looking 25° east of north the course of the Colorado was tracked by clouds of flying sand. The Gila comes into it nearly at right angles, and the point of junction, strangely chosen, is the hard butte, through which with their united forces they cut a cañon, and then flow off due magnetic west, in a direction the resultant due to the relative strength of the rivers. The walls of the cañon are vertical, and about fifty feet high, and 6,000 feet long. Almost before entering the cañon, in descending the Gila, its sea-green waters are lost in the chrome-colored hue of the Colorado. For a distance of three or four miles below the junction the river is perfectly straight, and about 600 feet wide, and up at least to this point, there is little doubt that the Colorado is always navigable for steamboats. Above, the Colorado is full of shifting sand-bars, but is, no doubt, to a great extent, suscep-

tible of navigation. The Gila, at certain stages, might be navigated up to the Pima village, and possibly with small flatboats at all stages of water.

"Near the junction, on the north side, are the remains of an old Spanish church built near the beginning of the 17th century by the renowned missionary, Father Kino. It will probably yet be the seat of a city of wealth and importance, most of the mineral and fur regions of a vast extent of country being drained by the two rivers. The stone butte through which they have cut their passage is not more than a mile in length. The Gila once flowed to the south and the Colorado to the north of this butte, and the point of junction was below. What freak of nature united their efforts in forcing the butte is difficult to see."

Fort Yuma now stands on a portion of this river-pierced rock, and the walls of the cañon furnish abutments for a railroad bridge! Not often are the freaks of nature more opportune.

Major Emory was accompanied as far as Santa Fé by Lieutenants James W. Abert and William G. Peck, who were detached at this point to explore portions of New Mexico. On the 8th of October they began the descent of the Rio Grande to Algondones, where they made an excursion up the Rio Jemez, returning and continuing down the Rio Grande to Albuquerque. Having examined the country along the river as far south as the ruins of Valverde they returned to Albuquerque, and Santa Fé. From the latter place Abert journeyed to Fort Leavenworth by the route followed by Emory in entering New Mexico, arriving in March 1847. Peck remained at Santa Fé, and in April 1847 made a reconnoissance of the Cimarron route, of which no report seems to have been made.

Another expedition in 1846 was that of Colonel P. St George Cooke, whom General Kearney sent from

La Joya to Santa Fé to take command of the Mormon battalion then en route for California. Cooke assumed command October 19, 1846, and led the battalion of 400 men and a wagon train down the Rio Grande to a point a few miles above San Diego, on that river, where he crossed to the west side, and taking a southwest course to Ojo de Vaca, crossed the road leading to the copper mines to the Yanos, travelling south to the Sierra de los Animas which he crossed one mile from the Guadalupe pass, and coming to the San Pedro river followed it forty-eight miles, after which another forty-eight miles in a northerly direction brought him to Tucson. From Tucson he marched to the Pinos villages on the Gila, and thence down that stream to the junction with the Colorado, crossing which he arrived at Warner's rancho, and the coast, his route being almost identical with a railroad route subsequently adopted.

Brevet Captain W. H. Warner, topographical engineer, who had accompanied Emory's expedition, after being relieved from duty with the major, made in 1847–8 extended examinations of the route from San Diego to San Francisco, and in 1849 was exploring the country near the Oregon boundary for railroad passes in the Sierra, when he was killed by Indians while surveying near the range which bears his name. Lieutenant Williamson, who belonged to the exploring party, secured his notes, from which the report was made out, and included in the *Pacific Railroad Reports* published by congress. Warner's surveys were the first explorations on the Pacific coast looking to the construction of a trans-continental railroad.

Lieutenant George H. Derby, by order of General Riley, made a reconnoissance of the Sacramento valley in 1849, and furnished a map of the country. A second exploration was made by Derby in 1850, from Monterey through the mountains to Tulare valley, to discover the nature of the passes to be used for roads.

In 1848 Captain J. C. Frémont made an explora-

tion independent of government aid, with the object of determining the nature of the country on the upper waters of the Rio Grande, and of discovering a pass through the Rocky mountains in that direction. He had a party of thirty-three men, and a complete outfit; but unwisely undertaking to reach the source of the river after the snows of winter had commenced to fall, disaster pursued him, and he escaped from great peril with the loss of one-third of his company, and all of his animals. Being succored by his former guide, Christopher Carson, of Taos, he reorganized his force and proceeded toward the Gila, the course of which he followed, reaching California in the spring of 1849. The march of the rifle regiment under Colonel W. W. Loring, from Fort Leavenworth to Fort Vancouver via the South pass was reported fully, and added many descriptive passages to the archives in the office of the secretary of war. In the same year Captain Howard Stansbury, of the topographical engineers, conducted an exploring expedition to the valley of Great Salt lake, assisted by lieutenants Gunnison and Carrington, both of whose names have since become memorable from their connection with Indian tragedies in the mountain region then first traversed by them. Stansbury wintered at Salt Lake City, and made a survey of the great lake in the summer of 1850. He was the first to survey this pass afterward adopted by the Union Pacific railroad. From the notes of these several expeditions Lieutenant G. R. Warren drew a *Map of the Territory of the United States, From the Mississippi River to the Pacific Ocean*, which was published in 1858 by the government, accompanied with some later surveys ordered by congress.

In this brief résumé of observation tours, the cost of which was paid by the government, I have made no mention of the valuable aid given to discovery by fur-hunters, traders, immigrants, and missionaries, whose circumstances and pursuits made them familiar

with routes and passes. Scientific exploration has hardly shown us one which necessity and industry had not previously pointed out.

By comparing the dates above given with the history of railroad development which is to follow before coming to the final action of congress in ordering railroad surveys, the correspondence between their progress may be noted.

Fourteen years before the conquest of California, and when "the Oregon" was our only possession on the Pacific, Hartwell Carver, grandson of the Jonathan Carver who gave the Oregon river its underivable and curiosity provoking name, conceived the idea of a transcontinental railway, to terminate at the mouth of the Columbia, whence it was to bring the commerce of the Indies, about which a great deal was said during the long period when our northern boundary was unsettled, and which was to flow along the Columbia valley, through the South pass and onward to the Atlantic. There were great men in the government in those days—orators, with the imagination of poets; statesmen, with the genius to enunciate never-to-be-forgotten doctrines of national polity; word-painters, who pictured a western ocean whose every billow "twinkled with a sail," and enthusiasts, who believed as they dreamed. They laid the foundations of a century of wonderful achievements.

One of these enthusiasts was Carver, to whom the great transcontinental roads owe a monument, and to whom the first gave a free passage to the Pacific thirty-seven years after his publication in the New York *Courier and Inquirer* of a plan by which such a road might be built. These publications were followed by memorials to congress from 1835 to 1839. For fifteen years he continued to importune that body, being supported a part of the time by Asa Whitney, who finally abandoned him on finding the opposition too powerful to be overcome.

Carver finally proposed that a perpetual and exclusive charter should be given him and his associates, to construct a railroad and telegraph line from Lake Michigan to the South pass, with branches to the mouth of the Columbia and the bay of San Francisco —not a bad plan, as everybody knows, "the true Pacific route" as it is called by an able engineer even now. A grant was asked for a belt of land or right of way for the whole distance, and all the material required from the public lands, and the privilege of purchasing 8,000,000 acres of selected lands at a dollar and a quarter an acre, to be paid for in stock of the company as the road was completed—a plain and honest proposition. But to this the people in convention would not agree. The public lands belonged to them; democracy was the popular form of politics, and the democrats were opposed to internal improvements. They said congress had no constitutional right to engage in stock-jobbing with the people's means—a safe sentiment when not carried too far, and when the public money was not too freely used in external acquisitions, to which democracy was inconsistently prone about this time. Had Carver been allowed to undertake his road it would have swallowed up his 8,000,000 acres before he had reached the Missouri. It was to be laid on stone foundations, and to be furnished with sleeping, dining, and saloon cars. From the Missouri to the Rocky mountains he would have found little, either wood, stone, or other material; but this does not detract from the value of his ideas, which experience has only improved upon without discarding. He spent the best years of his life, and what in those days was a fortune, in urging his scheme upon the attention of congress and the people.

As one may learn by reference to the public prints from 1836 for a period of ten years, the discussion of plans for a transcontinental railroad was continuous, after which it was chiefly transferred to congress. During these ten years John Plumbe, of Dubuque,

Iowa, proposed at a public meeting held for the purpose on the 26th of March, 1838, to build a railway from the great lakes to the Columbia river. A memorial to congress was drafted by a committee of which Plumbe was chairman, "praying for an appropriation to defray the expense of the survey and location of the first link in the great Atlantic and Pacific railroad, namely from the lakes to the Mississippi." Their prayer was granted, and money appropriated for a survey, the report made to the secretary of war being of a very encouraging character.

Plumbe also drafted a memorial purporting to come from the Wisconsion legislature at the session of 1839–40, which he presented at Washington, but without effect, when he transferred his efforts to New England, where his labors were also apparently unappreciated. His plan was to secure from congress an appropriation of the public lands in alternate sections on each side of the line. The company might consist of any persons who chose to participate at five dollars a share, the stock being divided into 20,000,000 shares, and twenty-five cents a share should be paid down with which to commence operations; twenty-five cents a share when the first $5,000,000 was exhausted, and so on to the end. The road was expected to do business enough to pay expenses from the completion of the first section. But as the scheme contemplated constructing no more than one hundred miles a year, more than twenty years would be required to complete it, and who could tell what might happen in twenty years? The Wisconsin memorial was accompanied by a bill which being introduced in congress was voted down by southern members who, besides being opposed to an appropriation of the public lands, were not in favor of a northern route.

Perhaps the most conspicuous and persistent of the transcontinental railway projectors of the period was Asa Whitney. He was a New Yorker, and having

very hopeful commercial ideas, as well as a more than usual familiarity with the importance of Asiatic trade, having passed several years in the Chinese empire, was enthusiastic in recommending the United States to secure at any cost a commerce with the Indies and China by the most direct route. His plan also contemplated the use of the northern route to the mouth of the Columbia, or to Puget sound, or both. The southern states regarded this recommendation as sectional, which feeling was ill-founded. At this time we had no ports on the Pacific south of Oregon. During the fifty years of controversy over our northern boundary we had contended earnestly for our rights in Oregon in order that we might have this frontage on the Pacific. Already a hardy and patriotic population was occupying that territory, which received accessions yearly of large numbers of settlers. It was natural and inevitable that the earliest railroad projects should point that way—the way that Jefferson had indicated in 1804—the route about which clung all the romance of a romantic age.

But if Carver had fallen far short of asking for the necessary aid to construct his road, and if Plumbe had come pretty close to the limit of expense, Whitney was too sagacious to commit a like error, but demanded a breadth of sixty miles along the whole length of the line, with all that the land contained of vegetable or mineral resources. He asked nothing else but the land, which he proposed to sell to raise the required amount of money, and to retain for himself whatever remained unsold after the road should be completed. The question of time does not seem to have been taken into account, but the schedule of tariffs was most remarkable. He offered if the government would allow him to charge one-half cent per ton per mile on ordinary freight carried any distance over 200 miles, to carry the same all shorter distances for half the amount charged by other railroads As few roads were likely to compare with his projected

road in length, he would be safe to get his half cent a mile over the greater portion of it, while his half price on the shorter distances would secure him all the business on the eastern end that could be reached. But the striking absurdity of half a cent per ton per mile as a non-competing price must raise an incredulous smile upon the face of a California railroad patron or proprietor. He offered to transport Indian corn to the Pacific for twenty cents a bushel, and a barrel of flour for a dollar and a quarter, and to carry passengers for "half the usual price" for twenty years after the completion of the road, besides carrying free the United States mails, troops, and war material for the same length of time.

Whitney's project, which was presented to congress in January, 1845, was argued for and against for several years in public journals and in the halls of congress. Some saw in it a power to be dreaded, imperial in resources, which might menace the government and hold sway over elections, if it did not divide the union by erecting a principality throughout the breadth of the continent. Some thought such a work as a continental road ought to be constructed and owned by government, while others prophesied ruin should congress appropriate the public money to this use.

Among those who believed the government should construct the road was George Wilkes, who was not without many supporters in 1845–6, and whose ideas were somewhat more advanced than those of his co-projectors. He showed that an official survey would so enhance the value of land in that direction that it would be an easy thing to find money for construction purposes. His proposal was submitted to congress in December 1845 by William B. Maclay, of New York, and was referred to the house committee on roads and canals, whose chairman, Robert Smith of Illinois, reported favorably upon it, and Wilkes addressed a communication to the legislature

of far-off Oregon, asking the approval of that body, which was given in a memorial to congress. The Whitney and the Wilkes projects were before the public at the same time, and there were a number of aspirants for the distinction of originating a scheme of railway communication with the Pacific coast, among whom were John P. Gaines in 1834, Lewis Gaylord Clarke in 1836, Lilburn W. Boggs of Missouri, and since of California, and Zadock Pratt of Prattsville, New Yok, at a little later period. The idea did not, however, belong to any individual, but was born of the necessity and the opportunity, in many brains at once. It was not that it was unpopular that it was not accomplished, but that one part of the people dare not trust the other part with the means or the power.

Said a facetious writer in a southern California newspaper in 1869: "About 270 years ago John Smith sailed up the Chickahominy, duly provisioned for a long voyage, fully expecting to reach the Pacific ocean. The course was well chosen, but water failed, and he was disappointed in his hopes of discovery. After his day many attempts were made to shorten communication between the two coasts, and some of them, viewed in the light subsequently acquired, were as ridiculous as the first." They were ridiculous, however, only as all experiments are so when compared with the accomplished fact; in each new absurdity there was a little gain.

In 1846 public meetings began to be held very generally to consider the Pacific railroad question, there being two great parties, one favoring a land subsidy, and the other a national road belonging to the people, with the government at the head. These assemblages were particularly frequent in the west, in 1847, from which large migrations were annually made to Oregon and California. Conventions were held at Canton, Ohio; Galena, Illinois; Bloomington, Indiana; Burlington, Iowa; and other places. Even

the Canadians caught the infection, and talked of building a railroad from Halifax west as far as Quebec, and of carrying it through to the Columbia by making a grant of all the crown lands, not previously located, along the line of survey, with a preëmptive right to the shareholders to purchase a part of these lands on favorable terms, and the guaranty of five per cent to be paid by the government on all the money invested. The conclusion of the boundary treaty in June of that year which fixed the line at the forty-ninth parallel, above which there was no population except Indians and fur-traders, silenced this proposition for the time.

The acquisition of California and a large body of Mexican land on a parallel with the slave states in 1846–7, while it indicated more than ever the need of rapid and easy transportation to the Pacific, introduced a new political bias against a transcontinental railway, the southern states being unwilling, if there could be but one road, that it should be north of the line separating the free from the slave states, and which they contended should be extended to the Pacific. On the other hand the northern states were unwilling, if there could be but one road, that it should go so far south as to be practically a southern road.

At a railroad convention held at Chicago, July 7, 1847, William M. Hall, of New York, made a speech in favor of Wilkes' proposition for a national road, the points of which he said were: first, that it should be owned by the government; second, that it should be constructed and controlled by sworn commissioners appointed by the legislatures of, or elected by the people of, the various states; third, that it should start from the western border of Missouri near the parallel which would strike the South pass, and continue westward from there, under the jurisdiction of the general government; fourth, that its revenues should not exceed the measure of its expenses, while

it should be open to foreigners on the same terms as our own people, all customs charges to be returned on reshipment; and fifth, it should be built out of money in the public treasury, and not by the allotment of land for the purpose. It was suggested, however, that to every laborer or artisan employed on the construction of the road for one year, one hundred acres of land contiguous to the line, or near it, should be granted, as a means of securing settlement. A system of emigration from the states and Europe should be adopted, which would enable the commissioners to replace the second year the laborers of the first who made settlements, and so on to the end, "many millions" of workingmen being thus furnished with a freeholding under our institutions. This beneficent purpose was prevented from being carried out, not alone by its general impracticability, but by its heavy demand upon the treasury of the people, who were not to be allowed to reimburse themselves, and by the selection of the South pass route. A reference to my résumé of expeditions during President Polk's administration will show that nearly if not quite every reconnoissance or survey directed by the secretary of war during this administration was along the parallels running west from the borders of Louisiana and Arkansas, or at the highest of Fort Leavenworth, and south of the Arkansas river.

Meanwhile congress was kept well informed of the sentiment of the people on this important question. Discussion, and the rapid march of events in the nation's history, were removing much of the dread of national ruin which ten years previous was made the foundation of opposition to a Pacific railroad. Polk's administration had shown them to what brilliant achievements the people's purse could be devoted, and that it was better to be in debt for a desired advantage than to resign the expectation of it.

In 1848, sixteen of the states, Tennessee, New Jersey, Indiana, Illinois, New York, Connecticut,

Maine, New Hampshire, Vermont, Rhode Island, Georgia, Maryland, Alabama, Ohio, Kentucky, and Pennsylvania, through resolutions of their legislatures, and Michigan through its senate, expressed their approval of Whitney's plan of building the Pacific railroad, with a fund created by the purchase and sale of lands to be set apart by congress for that purpose.

On the 27th of June John M. Niles, of Connecticut, obtained the consent of the senate to introduce a bill to set apart and sell to Whitney a portion of the public lands for the purpose of enabling him to build a railroad from Lake Michigan to the Pacific ocean. When in July Niles moved to take up the bill, Senators John P. Hale of New Hampshire and Thomas H. Benton of Missouri spoke strongly in opposition to it, and Niles' motion was laid on the table. In August Niles attempted to bring up his bill by appending it as an amendment to a bill granting a right of way, and aid, to a road from Mobile to the mouth of the Ohio river, but subsequently withdrew it to allow the original bill to pass.

On the 29th of January 1849 Niles moved in the senate to take up the bill previously introduced, with the remark that the question was one in which the whole country was interested, and that the people were surprised by the indifference of congress in relation to it. He wished to know if the senate was prepared to enter upon its discussion. If California was to become a part of the union, as in his judgment it must, a closer connection with it would become imperative; to which Senator Solon Borland of Arkansas, from the committee on public lands, replied that he had been directed, instead of a report on the memorials of the legislatures, to urge the passage of a joint resolution reported from the committee at the previous session adverse to the bill and the memorial of Mr Whitney, and simply authorizing the secretary of war to cause surveys to be made from the Mississippi valley to the Pacific ocean to ascertain the best route.

Henry S. Foote of Mississippi regretted that any opposition should be made to the motion of Senator Niles, declaring that he particularly wished the bill taken up, as he had an amendment to offer. He thought it due to the measure and the author of the measure that the senate should proceed to a respectful consideration of its propositions; whereupon Mr Borland replied, that while he was disposed to treat respectfully the opinions of senators, he did not feel called upon to show any marked regard for an individual who came before congress asking its action for his especial benefit, and to enable him to carry on a gigantic speculation; insisting that there had been no actual survey of the proposed route to the Pacific, and no explorations except those of Colonel Frémont and Major Gillespie, both of whom declared it utterly impracticable.

The end of this exchange of senatorial courtesies was that Senator Foote moved his amendment, which was a change of route after crossing the Missouri, the road to run in a southwest direction to some opening south of the South pass, and thence west to the bay of San Francisco, or of Monterey; but if such a pass should not be found, then to run direct to El Paso del Norte, and thence to San Diego on the Pacific. Borland then offered an amendment which was to direct the secretary of war to have explored by the topographical corps such routes as he thought proper in order to test the practicability of a railroad from one or more points on the Mississippi river below the falls of St Anthony to the Pacific ocean. And there the matter ended for the term, so far as the Whitney enterprise was concerned.

But the "national" plan had a strong advocate in Thomas H. Benton of Missouri, who on the 7th of February delivered a speech of considerable length in the senate on the question. "I go," said he, "for a national highway from the Mississippi to the Pacific, and I go against all schemes of individuals or com-

panies, and especially those who come here and ask of the congress of the United States to give themselves and their assigns the means of making a road and taxing the people for the use of it. Make a great national work like this a matter of stock-jobbing, a matter of sale upon the exchanges of Europe and America in shares, the issuing in fact of a circulating medium in the shape of shares! Sir, I go against it in toto. I have done it from the beginning, and shall ever do it. Not only are individuals utterly unable to undertake any work of this kind, unable to carry it on, unable to protect it when it is done, but sir, I have no idea of letting any individuals levy a tax upon the American people to an amount which they beg from us for the building of the road. I look upon all such applicants as jobbers, and repudiate them. We are ourselves to furnish the investment—the American people are themselves to furnish the investment, and then these individuals are to levy a toll equal to the amount invested by the American people who are to furnish the capital. I repudiate the whole idea, sir. I go for a national highway; no stock-jobbing. I am, Mr President, for a central highway—central, because it is the one that is most national, and accommodates the greatest number of persons—central, because the road admits of branches to the right and left, and the bill which I propose to bring in provides for one of these branches to Oregon, and another may be added for New Mexico."

The truth is, Benton would have a plan by Benton. His scheme was a road from St Louis to San Francisco, as nearly straight as might be, and it was the determination to find a pass to accommodate this so-called central route, as witness Frémont's hare-brained attempt to cross the Colorado mountains the following winter. Failing in this he turned south to Taos, and took the Gila route to San Diego. This failure of Frémont's was a strong argument against any route in the north, it being taken for granted

that latitude decided the amount of snowfall, and strengthened the cause of the advocates of a southern route.

Benton's bill reserved a breadth of one mile from Missouri to the Pacific ocean, in order to provide room for every kind of road—railway, plank, macadam, and electric motor—as if one belt of assorted roads in the middle of the United States territory could be made to accommodate all the country on either side! A part of the plan also was to have a line of military posts along it, as without these, it was said, it was in vain to have a road. A telegraph was to accompany it besides; indeed, this national mile-wide band of highway was to be secure from every manner of evil and danger—"a road in which the farmer in his wagon or carriage, on horse or on foot may travel without fear, and without tax—with none to run over him or make him run out of the way. I look forward to the time when this continent is to be settled from one end to the other—when there are to be towns and villages upon it—when neighbors will want a convenient road. They may there find a space for them in which they shall not give way to cars or anything else—a road not to be interfered with." This was the language of a man whose ideas were drawn from ancient history and Roman methods, who was, although a prophet of the future, unable to rise to the privileges of the present or cope with the rapid march of achievement.

Benton's plan did not contemplate a continuous railway, but the track should be of iron "where practicable and advantageous, and shall be macadamized, or otherwise constructed where not so practicable and advantageous." Sleighs might be used during those months of the year when snow lay deep in the mountains. His proposal for providing for the cost of construction was to devote to it the proceeds of seventy-five per centum of the public lands in Oregon and California, and fifty per centum of the amount of

the sales of all other public lands in the United States. The importance of the road to the Pacific coast was recognized by charging upon it twenty-five per cent more of the cost than upon other portions of the country. Nothing came of Niles' or Benton's bills in the senate, which indeed was in the midst of the political struggle over the admission of California, before which contest even the question of a Pacific railroad shrank into a secondary importance. Nevertheless, on the 17th of February 1849 Borland presented a petition asking for aid for the construction of a railroad from Memphis to the Pacific ; and on the same day Samuel Houston, of Texas, introduced a bill authorizing the Galveston and Red river railroad company to construct a railway to the Pacific ocean in California, which bill was referred to the committee on territories.

Down to 1848 the lower branch of congress had shown little interest in the Pacific railway schemes. In May of that year Robert McClelland, congressman from Michigan, and chairman of the committee appointed to consider the legislative memorials above mentioned, reported a bill similar to the Niles bill in the senate, and James Pollock of Pennsylvania, another member, supported it with a favorable resolution by the committee, which was the first action vouchsafed by any member of the house in connection with the continental railroad, and although the bill was rejected was an evidence of a growing sentiment in congress in its favor. It cropped up once or twice during the session of 1848–9, but was speedily voted down.

Meantime Whitney, in May 1849, published a pamphlet embodying his views, and arguments in favor of them, as well as his objections to all other proposed plans for constructing the Pacific railroad. There was much sagacity in his treatment of the question. He objected to the time which would be required to complete the government survey, pointed

out the sectional quarrels that would take place over the selection of a route, prophesied that they would delay the work indefinitely, and that when these should be settled, if ever, the measure would become a party engine of immense power which would be wielded to the detriment of good government. It was very unlikely, according to his view, that the means to build the road would ever be voted, but should it be it must be as a party measure. Money would be drawn from one section of the republic to another to be squandered by office-seekers, and in short the business of so vast a concern would absorb and control the legislation of the country, and become fifty times more obnoxious than a United States bank, over which the people had been so much excited. As to cost, his estimates were satisfactory to a majority, it being generally conceded that the work could not cost less than $69,226,600, and probably would not be done for less than $100,000,000.

But the bright intellects of a committee of Boston men had shown them where to attack Whitney's plan. To the New York chamber of commerce the question was by them propounded: Assuming that Whitney would build ten miles of road this year, take another year to sell the land, and three years more to get the money, being thus at the end of five years prepared to build the next ten miles, and so on, would it not take him 850 years to make 1,700 miles of road? Or if by a stretch of imagination he should build ten miles of road, sell his land, and get his pay all in one year, would it not even then take him 170 years to build 1,700 miles? This question caused a great chuckling among the advocates of a national road. But no one had yet discovered the way to build it.

In truth it could not have been done at this period had there been no sectional strife to delay it, without devoting to it all the money derived from the sale of the public lands—$3,328,642 for 1848; and then at the rate of about 80 miles a year, at which pace the

road would reach the Pacific in something over twenty years, even at the computed distance of 1,700 miles which was short of the actual distance several hundred miles. The attention of the public was taken up with other affairs—first of all with the gold production of California, and how to get there immediately. Congress had assisted the United States Mail and the Pacific Mail Steamship companies to obtain steamships to carry out their contracts with the government, and had subsidized them liberally. The Panamá railway company—William H. Aspinwall, John L. Stephens, and Henry Chauncey, and their associates—were asking for a twenty years' government contract to encourage them in the construction of a road across the Isthmus, a subsidy equal to a steamship subsidy, namely $250,000 annually for carrying United States mails, troops, and munitions of war 52 miles forth and back monthly if required.

It was argued in its favor that it would furnish a temporary substitute for a transcontinental road, as it would make easy and rapid connection between steamship lines on both oceans. The discussion brought up the subject of interoceanic canals, and the prospect of one day possessing such a passage into the Pacific at one of the several isthmuses below Mexico. The discovery of gold and the manifest importance of our Pacific possessions had suddenly brought to the surface many questions which otherwise would have appeared in the usual slow course of diplomatic conferences, but which now crowded each other in their haste to be heard. Among them all the Pacific railroad held its place, and steadily, if slowly, gained supporters.

In the spring of 1849 there was a railroad meeting at St Louis, at which arrangements were made for a national convention, every state to be invited to send delegates who should meet at that city, October 16th, to express their will. Ten northern states, and Vir-

ginia, Kentucky, Tennessee, and Louisiana sent delegates, who altogether numbered 835.

The only point much discussed at this convention was that of routes. Benton was present to advocate the central route, which he did with much confidence, taking for truth the report of Frémont, who was deceived by the representations of men owning large land grants in situations to be benefited by a railroad; namely, Maxwell, St Vrain, Beaubien, and Wootten. These men held a public meeting at Taos, at which St Vrain presided, and at which the route selected by Frémont on their recommendation was declared excellent, but which they afterward scoffed at. This could not then be known to Senator Benton, who threw all his influence against the South pass, saying that Frémont did not approve of a road so far north, and had found a better one several degrees south of it which he offered to the country.

There was another Missourian present, John Loughborough, who had occupied the time intervening between the spring and autumn meetings in gathering evidence for and against the South pass, and who succeeded in carrying the convention with him in favor of that route. It should be remembered that the people had not yet lost sight of the fact that Oregon contained a population drawn from the western states, who had long been asking for a national road of some kind, protected by military posts, and who had memorialized congress in favor of a railroad. Only the people of the extreme southern states were willing to ignore their claim on the nation's aid in subduing the great northwestern wilderness which they had toilsomely reached by weary months of travel with ox-teams. By the South pass road Oregon and California could be easily reached. If there should be a pass chosen several degrees south, pointing direct to San Francisco, or Monterey, as Frémont desired, the road would become strictly a highway to California. No definite plan and no definite knowledge had

resulted from more than fifteen years of agitation. It had become evident that the location of the road would stand in the way of government aid, even if the financial problem could be solved, for sectional jealousies were at their bitterest, and congress was the theatre of a gigantic contest for principles on one side and questionable rights on the other.

Of the routes projected there were three that had been long under consideration: one from Memphis to El Paso and thence to San Diego, California; that on the 38th parallel; and that through the South pass. But now appeared Loughborough with what he called "the new route," and about which he wrote a pamphlet, published in December 1849. His new route started from St Louis and went to Independence, the point from which both the Santa Fé traders and the Oregon immigrants had long been accustomed to take their departure; but it followed the track of the immigration to the Platte, and along the south side of that river to the south fork, crossing the latter to Fort Laramie, running thence to the South pass, and Bear river via Sublette's cut-off. Here it diverged to the Humboldt valley, which it traversed to the Truckee river and pass, descending the Sierra into the Sacramento valley.

There was nothing new about this route, which had been travelled over the greater portion of its length by the immigrations of successive years from 1843 to 1849, except the use of the Truckee pass, first resorted to by a wagon train in 1844, and again in 1846, when the Donner party became fatally entangled in its snows. Most of the large body of California gold-seekers of 1849 entered California by this route, although the Carson pass, and another at the head of the American fork of the Sacramento river, and a fourth leading into the San Joaquin valley from the east, were already known and travelled.

Loughborough owed his information concerning the availability of the Truckee route to a journal kept by

W. R. Singleton, and furnished by him in 1849. Frémont had indeed published an account of his expeditions of 1843–4, during which he entered California by the Walker and left it by the Carson pass, and whatever difficulties there were in either were already known to the world. Major Carleton had also published in 1849 a table of distances, and of water, wood, and grass, on the route from Fort Leavenworth to El Paso via Santa Fé and from Fort Leavenworth to Fort Laramie via Fort Kearney, for the benefit of civilians as well as of the army, and all this information had a value in view of a future railway.

Loughborough, after pointing out the advantages of the Platte and Humboldt route, referred to the opinion that congress had not the constitutional authority to construct a railroad within the sovereign states—an opinion which had caused the legislature of Missouri to pass an act March 12, 1849, incorporating the Pacific railroad, under which a company was organized in January 1850, which asked congress for a grant of land to aid in its construction—which opinion he denominated a millstone around the neck of the project of a Pacific road. The right, he claimed, had always existed, and had been frequently acted upon, and sanctioned by the majority of the American people. He adjured them to disregard sectional and personal influences, and fix upon a definite course, reminding his readers that they should keep in view three great ideas: first, empire; second, nationality; and third, the revolution of the commerce of the world.

The St Louis convention left the question where it found it, and adjourned to reconvene at Philadelphia in April 1850.

But St Louis was not alone in holding a convention to consider the railroad question. At a convention in Boston it was proposed to adopt the central or 38th parallel route, and to form a company to be

chartered by congress, with a capital of $100,000,000, which after paying $2,000,000 into the United States treasury, should have the right to borrow government six-per-cent stock to an amount not to exceed $98,000,000, sufficient to complete and put in operation the entire road with a double track. Congress was to be asked to give the company a strip of land ten miles wide on the north side of the road, and land for roadbed and stations, with the right to take from the public lands such material as should be found there necessary to the construction of the road. It was proposed to complete the road from St Louis to San Francisco in four years, by employing three sets of laborers, who should keep the work continuously progressing day and night, with a reserve for special effort.

This plan received attention from business men as less objectionable than the enormous land grant of Whitney's scheme, or the great national expenditure of Wilkes' plan; for it could not be denied that congress might authorize a loan of the public credit for its own transportation purposes. The author of this plan was P. P. T. Degrand, who had associated with himself William Ingalls, G. H. Derby, S. S. Littlehale, James C. Dunn, Robert F. Fisk, and O. D. Ashley. A similar proposition was offered by the firm of Bayard and company, who would deposit $5,000,000 in the treasury as security for the faithful performance of their contract. But the objection was raised to both these proposals that congress had no authority to create corporations, and that these plans involved the necessity of making the road earn dividends for the stockholders, which the people objected to.

New Orleans and Memphis also held conventions in 1849, urging their preference for a southern route. It is refreshing in this age of certified facts and figures to recall the flowery eloquence with which men fifty years ago approached the knotty problem of a railroad

two thousand miles long. They talked of it as if it were an idyl in wood and iron, a vision wrought up by an Aladdin lamp or ring; they prophesied like the seers of Judea, turning loose their tongues and beating the air with their hands. "Within half a century," said the address of the Texas delegation to the Memphis convention, "we will have a population of twenty-five millions on the Pacific slope. That slope is now separated from us by the almost impassable barriers of a mountain and a desert. This mountain must be made smooth; this desert must be made to blossom as the rose. This people, blood of our blood, flesh of our flesh, must be brought to our doors. Social reasons urge it; political reasons require it; commercial reasons imperatively demand it. The east, the gorgeous east, will be opened to our commerce without a rival, a competitor. The east, not more celebrated in song for its perfume-bearing breezes and balmy clime, for its sacred legends and mystic lore, than in more staid and sober history for the splendor of its empires, the gorgeous magnificence of its palaces and temples, the magnitude of its rivers, the grandeur of its mountains, the fertility of its plains, the abundance of its gold and silver, and its precious stones, its gums, its teas, and its spices, the beauty and costliness of its manufactures, the untold variety of its productions, and for the extent and richness of its commerce—a commerce which has been sought by all nations who have risen to commercial greatness as far back as history reaches into the past, and which has always rewarded the search with countless wealth and unrivalled splendor. A commerce which in ancient times caused the cities of Tyre and Sidon, and Balbec and Palmyra and Alexandria, each in succession, to rise to such a height of general prosperity, commercial greatness, and refinement in the arts as to excite, even to this day, the wonder and admiration of the world. A commerce which in modern times caused Constantinople, and Venice, and Genoa, and Lisbon, and

Amsterdam, each in their turn, to attain the very pinnacle of commercial greatness, and caused them, single as they were, each to excel in the splendor of its achievements in arts and in arms, all the kingdoms and empires upon the earth. A commerce which has caused Britain to wrest the very trident from Neptune himself, and enabled her to utter the proud boast of mistress of the seas. This commerce with all its untold wealth, and its limitless future increase, may be ours—will be ours without the fear of a competitor, if we only reach forth our hands and clutch it." The names appended to this address were James W. Allen, T. J. Hardeman, M. Erskine, T. Connelly, William E. Jones, and E. Bellenger, "in behalf of the Gonzalez convention," which as well as the Memphis conference was held in October.

There had been time to digest these matters before the convening of the adjourned St Louis convention April 1, 1850, in Philadelphia. Robert J. Ingersoll of Pennsylvania was temporary chairman, and William B. Ogden of Illinois president of the organized convention. An effort was made to reconcile the sectional feeling. Thomas J. Rusk, of Texas, who was not present, wrote: "Let this road be constructed, and there will be no north and no south, no east and no west, but our country will be everywhere, and every spot of earth on which our hardy yeomen tread will be their home and the home of their brethren. All the angry passions which have of late agitated the public mind, breathing forth the unhallowed name of disunion, threatening the very existence of our free institutions, and causing the heart of every patriot to beat quick with dread when he reflects on the bare possibility of such a result, will pass away."

Letters were received from Benton, Orin Fowler, John Robbins Jr, Job Mann, Samuel R. Thurston, R. Chandler, Thomas Ewing, Charles E. Clarke, James M. Porter, John Cessna, and W. Milnor Rob-

erts. Accompanying a letter from Frémont, was a map of his route beginning at St Louis, running to Independence, and along the Kansas and Arkansas rivers to Bent's fort and thence to Cochitopa pass south of the Grand cañon, thence northwest to White river and west to the Uintah, crossing the divide into the Utah basin, and to the foot of Great Salt lake, where it turned northwest again to Pilot peak, and followed the Humboldt valley to the Truckee river and pass through the mountains into California. All the evidence for and against different routes was reviewed, and the subject of how to accomplish the end in view once more considered from all points. It was impossible, however, to bring all the delegates to one way of thinking. Joel B. Sutherland argued in favor of a national road. "No man living," said he, "ought to have the power of building this road vested in him and his heirs, nor should any company have that grant made to it." Robinson, delegate from Indiana, spoke in favor of Whitney's proposition. Morrison, of Pennsylvania, also favored this plan. Jacob Dewees of the same state outlined a project for a system of roads from Atlantic seaports to converge at St Louis, which should be the eastern terminus of the Pacific railway. Stevens of Rhode Island presented the views of a meeting held at Providence on the 20th of March preceding, and indeed there seemed no lack of interest anywhere, except in the southeast corner of the union, which had no voice in the matter.

The committee on resolutions took the national side of the question, declaring it to be the duty of congress "in some way to apply the energies of our country" so as to secure the earliest possible completion of a Pacific railroad; that the work being national should be constructed by national means; but in order to avoid state and local prejudices, the government should confine its operations to the territory outside of state limits, and leave to the states the

construction of the branches within their jurisdiction; but liberal appropriations of land should be made to aid the states, and congress should order a competent survey of all the routes believed to be practicable.

Morrison of Pennsylvania was opposed to the resolutions. John Biddle of Michigan, and S. R. Curtis of Iowa sustained them, and they were finally adopted. A resolution was offered by Elder, of Pennsylvania, that the president of the convention appoint one delegate from each of the states represented to report on the most feasible route, which was rejected. Solomon W. Roberts moved a recommendation to the American people to urge upon congress by numerous petitions an early and ample appropriation for surveys of the routes in contemplation for a railroad to California and Oregon, which was adopted.

Camp, of New York, offered a resolution that the electors of the country should be recommended to vote for no man for congress who was opposed to a Pacific railroad, which motion was declared not to be admissable; when T. B. Florence offered to amend by substituting for the more severe measure that the people in their primary assemblies should pass resolutions in favor of the railroad, which motion was tabled. It was not the purpose of the convention to stir up political dissension; there was enough of that already threatening the peace of the country. Speeches were made by the president and others in favor of a national road. Mr Ogden was not one of those who feared the nation would be ruined by undertaking so colossal an enterprise. He met the timid with figures, and showed them that when the population of the United States was only about 5,000,000, and the people were poor, that is, from 1790 to 1800, we had owed more than $70,000,000; that in 1816 the national debt was $127,000,000 with a population of no more than 9,000,000; yet such was the recuperative power of the nation that in 1836 we were out of debt, and had a surplus of $40,000,000, which congress distributed

among the states. With the then present population of 23,000,000, and a condition of the greatest prosperity, a debt of $170,000,000 could not injure the country, even if the expenditure returned nothing to the government, which, however, could not be as long as the government made use of the road for transporting mails, troops, and munitions of war, for which it annually paid large sums to contractors. The business of the Erie canal, which had been scoffed at in the beginning, had rapidly increased the wealth of the people, and so would a Pacific railroad in a far greater degree. A memorial was finally drafted, calling the attention of congress to the action of the convention, and leaving the subject to be disposed of by the national legislature.

The effect upon congress of this widespread interest of the people in the Pacific railroad was not perceptible at this time, when a change of administration and the admission of California occupied its attention, together with other more pressing measures. President Fillmore in his annual message in December merely expressed the opinion that it seemed to be the duty of the government to use all its constitutional power to "improve the means of intercourse" between the Atlantic states and the Pacific territories. With his mild moderation he ventured no farther than to call the self-created and lately admitted state of California one of our Pacific territories. He advanced no opinion as to what were constitutional measures. Indeed the message had much more to say concerning the projected Tehuantepec canal, and the convention between Great Britain and the United States for "facilitating and protecting the construction of a ship canal between the two great oceans, and of the grant to an American citizen of right of way across the isthmus" than concerning the iron track which the people desired within their own boundaries. Military expeditions were in progress, such as have been previously mentioned, but not more in view of a future

transcontinental railroad than in response to the petitions of western communities and legislatures to have the emigrant routes protected and improved.

All the while the question of the Pacific railroad was becoming more and more a political one. The north was divided between the national and the land-grant plans, nor did it insist upon a strictly northern, or free-soil route. But the south, which already regarded the acquired and public territory south of the Missouri compromise line as devoted to slavery, was averse to paying any portion of the cost of a road constructed on free soil, and was equally averse to allowing the north to have a railroad to the Pacific unless the south had one at the same time; the argument being that the road would greatly accelerate settlement along its line, which result would be prejudicial to the south by increasing a population hostile to the institution of slavery. A writer in De Bow's *Southern Review* pretended to favor Whitney's proposal, and its immediate acceptance, upon the ground that unless the appropriation asked for should be granted at once, the land reformers of the north, who gave away the public lands in soldiers' bounties to make capital against the south in the presidential campaign, would have nothing left with which to satisfy the proposed contract with Whitney in the country between Lake Michigan and the Missouri river.

CHAPTER VIII.

RAILWAYS—EXPLORATIONS AND SURVEYS.

SINGULAR SUBSIDIZATIONS—LAND DONATIONS—ENORMOUS WEALTH OF DEVELOPMENT—INFLUENCE OF CALIFORNIA GOLD ON EASTERN RAILWAY CONSTRUCTION—NUMBERLESS CONGRESSIONAL RAILWAY BILLS—PROGRESS IN AND ABOUT CALIFORNIA—PACIFIC RAILROAD SURVEYS—COLLATERAL EXPEDITIONS—STUPIDITY OF OFFICIAL SURVEYORS AMONG THE ROUTES AND PASSES OF THE FUR-TRADERS AND EMIGRANTS—VOLUMINOUS PUBLICATIONS—EXTENSIVE RECONNOISSANCES ON THE PACIFIC SLOPE.

THE right of congress to grant the public domain, which belonged, as the statesmen of the early years of the republic believed, to all the states equally, for which some return should be made to them, and the revenue from which should be applied to national affairs, such as payment of the public debt, was an idea of slow growth. The aid extended to railroad companies by the general government was at first in the form of "relief"—that is to say, of public land turned into money. The states in several instances made grants of some kind to encourage their construction. New Jersey, for instance, entered into a contract with the Camden and Amboy, and the Delaware and Raritan Canal company, both composed of the same individuals, by which the most complete monopoly ever instituted in the United States, if not in any civilized country, was established. In 1832 the legislature of that state granted to these companies the exclusive right of transporting passengers and goods by railroad or canal through the state, with a clause prohibiting the exercise of such a right by any person or company without the consent, not of the legislature, but of those companies. In return the state

received a certain interest in the road and canal, together with ten cents on every passenger conveyed through the state upon either of them, and eight cents on every ton of merchandise, coal, or other freight transported by the canal.

By another law of New Jersey passed in 1837, these companies were authorized to demand and receive from each person conveyed across the state, a distance of eighty-five miles, from Philadelphia to New York, the sum of four dollars if by daylight, and of five dollars if by night, the companies being required to pay into the state treasury one-half of the passage money received over and above three dollars for each passenger. The New Jersey law thus discriminated between persons living or coming from outside the state, the fare required of way passengers being only three cents a mile, or about half that collected from through passengers. It required only a passport system to make New Jersey a foreign country, so far as transportation was concerned, and a very unfriendly one. The road lying between the two principal marts of the United States was necessarily the great highway of travel for the whole country, whose citizens had business at the national capital or the principal commercial cities of the Atlantic seaboard. The constitution of the republic did not authorize a transit duty by any state upon passengers or freight, and yet the state of New Jersey had established a grievous one.

These companies also, not being in any way restricted, charged the government for the transportation of the mails exorbitant amounts, besides taking no trouble to connect the great southern mail for New York with the departure of their trains, and leaving them for seven hours at Philadelphia, to the great inconvenience of business men in the north. In 1848 a petition was sent to congress asking for relief from the double oppression of a transit duty, and the delay of the mails. The postoffice department also, for the

first time in several years, obtained a satisfactory agreement with the railroad company as to charges for mail transportation, upon an intimation that the government might construct a post-road, and relieve the Camden and Amboy of its contract with the government. The case of the Camden and Amboy was the first bitter lesson in transportation monopoly which the people of the United States had to learn, and it made them for a time cautious if not suspicious.

The first donation by congress of public lands for purposes of internal improvement was approved April 30, 1802, and was for the benefit of the people of the "eastern division of the territory northwest of the river Ohio," and was contained in the enabling act of Ohio. The donation was of one-twentieth part of the net proceeds of the lands lying within the state to be sold by congress after the 30th of June following, and was to be applied to the laying out and making of the public roads leading to the Ohio river, and through the state from the navigable waters emptying into the Atlantic. These roads were to be laid out under the authority of congress, with the consent of the states through which they passed. In March of the following year the secretary of the treasury was directed to pay three per cent of the net proceeds, as provided by the law, to persons designated by the state of Ohio, for opening roads.

Similar acts followed, differing only in the amounts granted to the states, down to 1824. In May of that year the state of Indiana was authorized to construct a canal, a right of way of ninety feet on each side of it being granted from the public lands. The state, however, did nothing until congress in 1827 passed two acts, giving to Indiana and Illinois half of ten miles in width of the public lands on each side of their canals to aid in the construction; one connecting the Wabash river with Lake Erie, and the other the Illinois river with Lake Michigan. The canals were to

remain public highways for the use of the government, and unless completed in twenty years the states must pay to the United States the amount received for lands sold.

An act of congress was passed in 1833 authorizing the state of Illinois to apply the lands granted in 1827 to the construction of a railroad instead of a canal, which was the first act looking to railroad construction with federal aid; but the state finally decided to build a canal as first contemplated.

In March 1835 congress granted a right of way thirty feet wide on each side of its line, to a corporation organized in Florida, with ten acres of land at its terminus, which was the first one granted to a railroad. In the following year a right of way eighty feet in width was granted to the New Orleans and Nashville railroad company. This act showed an advancement in ideas concerning the requirements of railroads, and exacted a description of the route and surveys to be filed in the general land office within sixty days after the survey. It granted plats of land not exceeding five acres in any one place, nor nearer than fifteen miles apart, for depot, workshop and station grounds, and it granted the right to take earth, stone, and timber for the construction of the road, from the public lands. Further, the work must begin within two years, and be completed in eight thereafter, or forfeit its grant.

A grant to the east Florida and other railroads contained similar terms, but required in addition that the companies should file maps showing the location of their roads within six months after such location. None of these roads were constructed; but similar grants were made in favor of other roads, few of which were heard of afterward.

Other internal improvements were also thus aided. The improvement of the Des Moines river in Iowa was aided by one-half, in alternate sections, of a strip of land five miles wide on each side of the river, to be

selected by agents appointed by the governor of the territory, and approved by the secretary of the treasury. The lands should not be disposed of for less than the minimum price of public lands; nor should more than $30,000 worth be sold before a cessation of sales during which the territory or state should certify to the president of the United States that one half that amount had been expended upon the improvement, after which land enough might be sold to replace the amount expended, and so on.

A grant to Wisconsin for the purpose of improving the Fox and Wisconsin rivers, gave alternate sections in a strip three miles wide on both sides of Fox river and the lakes through which it passed, from its mouth to the point where the portage canal should enter, and on each side of the canal, from one stream to the other. Both of these acts declared the improved rivers public highways forever for the use of the government; and the sections reserved to the United States were not to be sold for less than $2.50 per acre, nor were the granted lands to be sold for less than $1.25 per acre. A provision regarding the sale of lands, similar to that in the grant to Iowa, was made, but limiting the amount to $20,000 instead of $30,000. The improvement of the river in Iowa was subsequently abandoned, and the Keokuk, Fort Des Moines and Minnesota railroad constructed with the grant. Various grants were made which produced little improvement.

To John Wentworth, member of congress from Illinois, belonged the credit or discredit, as might appear, of introducing a bill, December 21, 1847, to grant the right of way to all railroads which should be constructed over the public lands, and Orlando B. Ficklin of the same state, of the authorship of a bill granting lands to aid in the construction of the Illinois Central railroad, the Terre Haute and St Louis railroad, and the Northern Cross railroad, of Illinois.

In January 1848 Stephen A. Douglas, senator from Illinois, proposed a bill granting a right of way, and a donation of public lands to aid in constructing a railroad from the upper and lower Mississippi to Chicago, which passed the senate on the 3d day of May by twenty-four yeas to eleven nays, but which failed in the lower house by only four votes. At the next session Senator Breese brought in a bill which, in recommending it to pass, he said did not grant a foot of land to the state of Illinois as a donation, "such as Ohio and Indiana had received," but only secured the right of way, and the right to preëmpt the unsold public lands along the line of the road, for which it proposed to pay the government price. Even this seemingly reasonable proposition, which was passed by the senate, found no favor in the lower branch of the national legislature. What if the government price of the lands should be paid, would that prevent a giant monopoly arising on so extensive a purchase?

The Illinois Central had been commenced in 1836, and about $1,000,000 expended upon it by the state of Illinois, which subsequently let it to a company. The company failing to go on with the construction of the road, returned its charter to the state, which at the period here spoken of was making an effort to complete the work by the aid of congress. The bill dragged along from session to session, during which time congressmen and senators compared opinions concerning the authority of congress to do what from time it had always done—make the public lands pay for such improvements as redounded most certainly to the public benefit, such as education, transportation, the care of the insane, and the deepening of rivers and harbors. The many sided question required perhaps all the study given it, and justified the dalliance, and the javelin-thrusts of wit with which its discussion was protracted, while the debators were evidently drifting nearer and nearer to magnanimity of feeling which made the disposal of the national heritage

as gratifying as the allotment of prizes at a festival.

In this mood the Illinois Central railroad bill was discussed in the spring of 1850. It proposed to grant to the state of Illinois, for the construction of a railway from the southern terminus of the Illinois and Michigan canal to a point at or near the junction of the Ohio and Mississippi rivers, with a branch to Chicago, and another to Galena, the right of way 200 feet in width, and the necessary materials of earth, stone, timber, and so on; the legislature of the state to furnish a survey of the route to the general land office. It further granted for the same purpose, all the even numbered sections for six miles on each side of the road for the whole distance—supposed to be about 400 miles—with indemnity for such lands within these limits as might have been sold or pre-empted; the construction of the road to be commenced simultaneously at both ends, and completed within a certain time. The odd sections remaining to the United States should not be sold for less than double the minimum price of public lands, but no restriction was placed upon the price of railroad lands.

It was stated in debate that the land granted had been in the market for twenty-five or thirty years without finding purchasers even at a dollar and a quarter an acre, although for the most part excellent agricultural soil, and therefore if the construction of a railroad doubled the value of the same number of acres given away or applied to this improvement, the nation as proprietor sustained no wrong. But the question was asked: Who then paid for the road? Was it not the settlers, who were charged double the usual price for government land? Wherein was the liberality of the government? The United States would have finally lost nothing, though the state of Illinois would be able to undersell them until its cheaper lands were disposed of. It was then decided to raise the price of all the lands in the twelve-mile-wide belt from Chicago to Cairo.

William R. King of Alabama secured an amendment which embraced the Ohio and Mobile railroad bill, making the title to the Central Illinois railroad bill read: An act granting the right of way, and making a grant of land to the states of Illinois, Mississippi, and Alabama, in aid of the construction of a railroad from Chicago to Mobile—in which form the act was passed and approved at the second session of 1849–50.

This was the first great railroad grant, extending from the great lakes to the gulf of Mexico; and it is a little remarkable that a railway to the Pacific should have so caught the popular sympathy, and not the one from Chicago to Mobile, for outside of congress there was no enthusiasm over this latter splendid enterprise. The whole line in Illinois was put under contract in 1852, and 10,000 men found employment upon it at an annual expenditure of $3,700,000. Ten years had been allowed for its completion, and in 1861 it was fully equipped and in operation throughout. The company to which the state had surrendered it had then realized $16,250,000, while the whole grant was estimated to be worth $40,000,000. The state of Illinois was populated and enriched by it. Subsequently its line was extended to New Orleans, at one point crossing the Mobile and Ohio, these two being among the longest roads east of the Mississippi.

Nothing strikes the mind with greater wonder, while remembering the cost of railroads, than a study of a modern railroad map of the whole country. It is scarcely thirty years since the Illinois Central was completed. Now, every state from Massachusetts to the western border of Iowa and Missouri is closely lined with them. We involuntarily exclaim, What labor and what resources! In these achievements far-off California was a participant, inasmuch as the production of $50,000,000 a year in gold was a stimulant to national vigor. It was undoubtedly true, also, that the continued agitation of the Pacific rail-

road question, and the constant iteration of arguments in favor of land grants, supported by example of the Illinois Central, caused the files of congress to be crowded with applications for subsidies from all the states created out of the public lands. At the session of 1850–1 these petitions were numerous; nor were the southern states, which had objected to internal improvements by the general government, at all behind the others. The Mississippi and Atlantic railroad company asked for a right of way through the state of Illinois. The Green Bay and St Paul railroad company asked for a right of way and a donation of public land to aid in the construction of its road. The New Haven and New London railroad company asked for a right of way. Another bill asked for aid in constructing a railroad from Martinsville to Franklin, Indiana, via Morgantown; another for aid to a railway from Hannibal to St Joseph, Missouri; another from St Louis to the western border of the state; another for aid in constructing a railroad from St Louis via Little Rock, Arkansas, to some point on Red river, and for branches to the Mississippi and Fort Smith; another for a grant of lands to the states of Louisiana, Mississippi, Indiana, and Illinois, to aid in the construction of a railroad from Madisonville in Louisiana to Jackson in Mississippi; another to grant alternate sections of the public lands along the line of a railroad from the Atlantic to the gulf of Mexico, in Florida; and still another for a land grant to aid the states of Louisiana and Arkansas in building a railway from Fulton on Red river to Providence on the Mississippi. These were all senate bills.

In the house were the following: A bill granting right of way through the public lands to the Northern Indiana and Buffalo and Mississippi railroad; a bill granting right of way to the Tennessee Mississippi and Alabama railroad company; a bill granting land to Ohio for the construction of a railroad; a bill

granting land to Pennsylvania for the construction of the Pennsylvania railroad, the Pittsburg and Connellsville railroad, and the Ohio and Pennsylvania railroad; and the same to a Pennsylvania company not named in the bill; a bill granting right of way and a grant of land to the state of Illinois to construct a railroad from Naples to the Illinois river, thence westward to the Mississippi, and from Springfield to the eastern line of the state; a bill granting land to complete the Northern Cross railroad from Danville, Illinois, through Champaign county and Springfield to Quincy, on the Mississippi river; a bill granting land to the Virginia and Tennessee railroad company; a bill granting 500,000 acres of land to the Hempfield and Ohio railroad; a bill granting aid to the construction of the Virginia and Tennessee and Central railroad; a bill granting lands to the state of Kentucky to aid in the construction of the Maysville and Lexington, Covington and Lexington Louisville and Nashville, and Maysville and Big Sandy railroads; a bill granting land to Illinois for a railroad from a point opposite Terre Haute, Indiana, to Illinois Town, Illinois; a bill granting land to Missouri to construct a railroad from the western line of the state near Fort Scott, to a point on the road leading from St Louis to Little Rock in Arkansas; a bill granting lands to Maine to aid in the construction of the Atlantic and St Lawrence railroad; a bill to aid in the construction of a railroad from the Virginia line to Knoxville in East Tennessee; a bill to grant land to Tennessee to aid in the construction of a railroad; a bill to grant land to Pennsylvania to construct the Junction and Williamsport railroad, and aid in the completion of the Williamsport and Elmira railroad; a bill granting lands to Florida and Alabama to construct a railroad from Pensacola bay, in Florida, to Montgomery, in Alabama; and a bill granting lands to Alabama to construct the Mobile and Girard railroad. This was truly a formidable assault on the land department of

the government, especially when coupled with the previous grant to the Illinois Central, and Mobile and Ohio railroads, and with Benton's bill "providing for the location and construction of a national highway, consisting of a railroad and common road from the Mississippi river at St Louis to the bay of San Francisco and the Pacific ocean, and to extinguish the Indian title to lands along the said highway, and to establish military posts, and grant land to the settlers thereon."

In spite of the ambiguity of the latter part of the above sentence, the reader knows, being by this time familiar with the subject, that it was the land and not the posts which the senator proposed for settlement. The bill "to set apart and sell to Asa Whitney of New York a portion of the public lands to enable him to construct a railroad from Lake Michigan or the Mississippi to the Pacific," and other Pacific railroad bills were at the same time before congress. At the session of 1851–2 there was an increasing number of applications for land grants, which, although the greater number of them failed, showed that the principle was recognized that the government might appropriate the public domain to the use of railroads.

It was just at this point in the history of the public lands that California became a state. By a resolution of the legislature of 1850 her senators and representatives were instructed to urge upon congress the immediate construction of a national railroad from the Pacific to the Mississippi river; and in order to facilitate the accomplishment of the work, to organize an efficient engineer corps, who should make complete surveys of the several routes previously recommended as practicable.

This measure, although unavoidable, was not calculated to hasten the construction of the railroad, as we shall see. Nothing was done to accelerate either

until Senator Brodhead of Pennsylvania, at the session of 1852–3, offered an amendment to the appropriation bill which authorized the secretary of war to employ, under the direction of the president, such portions of the corps of topographical engineers and others as he should think necessary to perform the required service, and proposed an appropriation of $150,000, which was afterwards raised to $200,000, to defray the expense of the explorations. The surveys were without unnecessary delay set on foot.

Before proceeding to notice the reports of the United States engineers, under the act of 1853, it will be interesting to refer to what had been done in California by volunteer explorers and army officers since 1849. During the year 1850 Joseph Walker, a private citizen, an enthusiast, and adventurer, who had passed many years in trapping beaver among the wilds of mid-continent before coming to rest on the Pacific coast, being deeply interested in the subject of a route to southern California, for the use of the immigration, shorter and better than that by way of Santa Fé or El Paso, made an exploration extending from the pass at the head of Kern river which bears his name, across the Mojave desert to the Mojave river where it turns southward, and thence northeast to the Colorado, which he crossed near the mouth of the Rio Vírgen. From the crossing of the main Colorado he proceeded due east to the Colorado Chiquito, or Little Red river, reaching the Rio Grande at Albuquerque. The result of his observations was that while water and grass were of too limited a quantity along a great portion of the route for the safety of immigrating companies, the chief obstruction to railroad construction would be found at the crossing of the main Colorado, owing to the different elevations of level plain on one side, and the mesa, or elevated plain, on the other; it being his opinion that the crossing must be at or near the mouth of the Rio Vírgen, or by a bridge thrown across the grand cañon

of the Colorado above, using the cliffs for abutments. Walker's exploration was of value as contributing to a more perfect understanding of the nature of the difficulties to be overcome in securing the most direct and practicable route to the Mississippi.

Following this attempt in the southern part of the state to find a proper outlet towards the east, was an expedition commanded by Lieutenant Williamson under instructions from Major Kearny of the first dragoons, which consisted of twenty civilians, and which set out from Yreka July 3, 1851, proceeding in a general course toward the locality where Captain Warner lost his life in 1849. For a fortnight they marched up and down the broken country between the Klamath and Pit rivers, returning by a circuitous route to the Sacramento at the place of Major Reading. Nothing of much value was added to the knowledge already possessed of the country near the Oregon boundary. A wagon road, perfectly practicable for a railroad to the South pass, or to Salt lake, had been for several years in use; nor could it be doubted that since immigrant wagons had passed over it into California a railroad could be brought in over this or some other pass in the broken Sierra.

About the same time the eminent Mormon apostle, Parley P. Pratt, led a company of his people from Salt Lake City to Los Angeles, via Sevier and Beaver rivers, and Red creek to Las Vegas, and thence by the Vírgen to the Colorado and the Mojave valley, through the Cajon pass to San Bernardino and Los Angeles. So far as railroad facilities were concerned, this route was probably quite as feasible as any yet explored, although as an immigrant route it had far too great a proportion of barren country upon the line.

In November of this year Lieutenant G. H. Derby, of the topographical engineers, sailed from San Francisco on board a schooner carrying supplies to Fort Yuma. He doubled the southern point of the penin-

sula, and passed up the gulf to Howard point, above the mouth of the Colorado, the vessel drawing eight feet. Above this he ascended to Heintzelman point, one third of the distance from the gulf to the fort. Here he met Major Heintzelman, who furnished him with a sketch of the river above as far as the fort, thus completing a chart of the river to Yuma.

During this year also a prospecting party of miners from Gold lake, in Sierra county, discovered Beckwourth pass, which they estimated would save the immigration 150 miles of travel from the Humboldt valley to the Sacramento valley, and avoid the Humboldt desert. A party was sent out to conduct immigrant trains by this route, but it never became a successful rival of the Truckee or Carson river passes.

Of explorations from the east, that of Captain Sitgreaves, ordered in 1851 but not commenced that year, was undertaken with a view to railroad construction solely. The expedition was organized at Santa Fé, and included J. G. Parke, R. H. Kern, and S. W. Woodhouse, the object being to make a reconnoissance of the Zuñi and Colorado rivers. The exploring party accompanied an expedition against the Navajos as far as the Zuñi, one of the headwaters of the Colorado Chiquito, starting from Albuquerque September 1, 1852. From the Zuñi it proceeded with thirty men down that river to within ten miles of its mouth, when they left it, and crossing a basaltic ridge to the westward struck the Colorado Chiquito, following down the stream until they came opposite the north end of the San Francisco mountains in Arizona, when they turned south around the base of these mountains to Leroux springs. Here they again took a southerly course, turning the Bill Williams mountains at the south end, passing in a northwest course from there over a broken basaltic country to the head of Yampi creek, down which they travelled to the main Colorado, crossing it at the head of the Mojave valley, and proceeding down it to Fort Yuma,

thence by the immigrant road over the Colorado desert, by Warner's pass, to San Diego, where the company disbanded. This reconnoissance was made with a compass, the distances estimated and checked by astronomical observations made with a sextant.

The Mexican boundary survey of 1852 was also auxiliary in its character to the various railroad and other road reconnoissances, Lieutenant Whipple and the commissioners agreeing with Major Emory and Colonel Cooke of former expeditions in approval of the route from El Paso west, finding no difficulty in bringing five wagons through to San Diego. A. B. Gray, of the boundary commission, considered the most feasible route to the Rio Grande to be a crossing of the Sierra Madre near the town of Mesilla, which was in a district in dispute between Mexico and the United States, but which Gray contended should be, and which in 1854 was, surrendered to this government by the terms of the Gadsden treaty. This was upon the thirty-second parallel route.

The thirty-fifth parallel route followed by Walker was again explored in 1853 by F. X. Aubrey, who left San José, California, in July, being at the Tejon pass fifty miles south of Walker's on the 12th. The object of the expedition, which consisted of Otero, Chavis, Perear, and sixty men with a mule train, all under the captaincy of Aubrey, was to locate a wagon road from San José to Albuquerque, north of the Gila, and as near as possible to the above line of latitude.

From the Tejon pass he journeyed to the Mojave river, and arrived at the Colorado on the 30th, a distance of 300 miles, and 600 miles from San José. He says in his journal, "We brought our boat on a wagon to this place without the least difficulty, and a railroad can be made with the greatest facility." From the Colorado to Albuquerque no insurmountable obstacles were found, and he, as Walker had done before him, decided upon the entire practicability of

this route, besides which he reported finding gold, copper, and coal upon the way.

Under date of March 24, 1853, Lieutenant-colonel S. H. Long, of the topographical engineers, submitted to Colonel Abert, chief of the bureau at Washington, a project for the conduct of the surveys authorized by congress. The amount of money appropriated, he said, was too small to admit of a careful survey of the vast territory west of the Missouri, and only a hasty reconnoissance could be made. He gave some interesting facts already ascertained, as, for instance, that the average declination in the surface of the country west of the states of Missouri, Arkansas, and Louisiana, from the Rocky mountains eastward was four and three quarters feet per mile; and its declination to the south about two and a third feet per mile. Where the Platte issued from the mountains in latitude forty-two degrees the elevation was 5,000 feet; and where it debouched into the Missouri, 1,000 feet. Where the Arkansas left the mountains the elevation was about 4,000 feet, while the Mississippi, in the same latitude of thirty-six degrees, was 275 feet above sea level. The most important part of the survey would then be in the neighborhood of the mountain ranges, with the object of ascertaining the most favorable pass for a railroad. He presented a table prepared by R. H. Kern, from observations and barometrical measurements by Frémont, Stansbury, Emory, and Graham, whose explorations have been mentioned as occurring previous to 1850.

NAME.	N. LATITUDE.	W. LONGITUDE.	ELEVATION.
South pass.....	42° 24′ 32″	109° 26′ 00″	7,220 feet.
Stansbury pass..	41° 08′ 02″	105° 24′ 11″	7,200 "
Coochelops pass..	38° 10′ 00″	106° 15′ 00″	8,000 "
North Zuñi pass..	35° 30′ 00″	108° 35′ 00″	7,000 "
South Zuñi pass..	34° 50′ 00″	108° 25′ 00″	7,000 "
Cooke pass.....	32° 30′ 00″	108° 30′ 00″	5,000 "

Long suggested that these passes should be carefully examined, although he admitted the insufficiency of the appropriation. It was his opinion that the most favorable route west of the Rocky mountains led, on the south side of the Gila, west from El Paso, and after crossing the Gila northwestwardly to San Diego, or northward to the San Joaquin headwaters. He also believed that the Sierra Nevada could be crossed by a railroad either at Warner or Walker pass; the former about eighty miles eastward from San Diego, very steep and rugged, with an elevation of 3,013 feet, and the latter near the main source of the San Joaquin, and 4,000 feet above the sea, but with an easier grade, and better adapted to communication with San Francisco.

The fact that the watershed of the North American continent had its greatest elevation in Mexico, whence it decreased to about 4,500 feet in the vicinity of the Gila river, increasing again to 8,000 feet in latitude 38°, diminishing to 7,000 feet at latitude 42°, and to 6,000 at latitude 47°, was pointed out; and that from the crest of this elevated plateau studded at intervals with vastly higher peaks, the country in the direction of the Pacific was one vast mountain system, varying from 500 to 900 miles in width, including, west of the Rocky mountains, the Nevada and Coast ranges, separated by elevated valleys, with no outlet to the ocean, was strongly brought out, impressing upon the minds of the corps selected for the surveys the necessity of thorough work, and of applying their labor to a few of the principal mountain passes.

On the 8th of April 1853 the secretary of war, Jefferson Davis, sent instructions to I. I. Stevens, lately appointed governor of Washington territory, directing him to survey a route from the Mississippi river to Puget sound, the general project being to explore westward from St Paul, or some eligible point

on the upper Mississippi, toward the great bend of the Missouri, and thence along the table-land between the tributaries of the Missouri and those of the Saskatchewan to some practicable pass in the Rocky range. A depot was to be established at Fort Union, at the mouth of the Yellowstone, where also a portion of the expedition would rendezvous and await the arrival of the main body. Another division should proceed to the Pacific coast, and work eastward through the passes of the Cascade range to such point of meeting as Stevens might appoint. The eastern division was also separated into several parties. Those under the immediate supervision of Stevens were C. Grover, United States artillery, George Suckley, surgeon and naturalist; F. W. Lander and A. W. Tinkham, civil engineers; J. Lambert, topographer; J. M. Stanley, artist; G. W. Stevens, assistant astronomer; J. Moffet and J. Doty, meteorologists, with about thirty non-commissioned officers and men. They left St Paul June 8th, crossing the Missouri at Sauk rapids, and taking the Red river trail to Pike lake, where Grover was detached to make a side reconnoissance, while the main party continued on to Fort Union.

While en route Lander made a reconnoissance of the valley of Cheyenne river, a portion of the Coteau du Missouri, and the upper valley of Mouse river. Lieutenant Grover examined a route from Pike lake toward Moose Island lakes, thence south and up the eastern bank of Lake Travers and Bois de Sioux river; thence by Dead Colt hillock and Butte des Or, and through Mouse river valley to Fort Union.

A. J. Donelson, with John Mallen of the 1st artillery, William Graham, and six enlisted men, left St Louis by steamboat May 21st, and made a reconnoissance of the Missouri river, arriving at Fort Union July 3d, where they awaited the arrival of Stevens, making in the mean time an examination of the country, travelling northwest to a point opposite the head

of the Big Muddy, thence northeast nearly to the head of White Earth river, which they reached in a southwest course, following it down to Fort Union.

On the 16th of August the whole expedition moved from Fort Union in two parties, Donelson to examine the route near the forty-ninth parallel, and Stevens to take the Milk river route travelled by the wagons of the American fur company, which followed the Missouri to Milk river at the Bear Paw mountains, turning south from there to Fort Benton. Tinkham, on the 3d of September, left the main command at Bear Paw mountain, and examined the valley of Milk river nearly to the forty-ninth parallel. Thence he proceeded to the Three Buttes and Marias river, and thence to Fort Benton. Stanley also left the main expedition near Fort Benton, September 11th, and made an excursion into the British possessions at Cypress mountains, passing near Three Buttes and Lake Pakokee.

Mullan on the 9th of September left Fort Benton with a small party to visit the Flathead camp reported to be on the Musselshell river. Crossing the Missouri he proceeded in a southeast direction, passing by the headwaters of Judith river, crossing the Musselshell, and continuing for eighty miles toward the Yellowstone, where he met the Flatheads, and returned to the Musselshell, which he ascended, and crossing the Belt mountains came to Smith river, which he followed for one day and crossed, when he turned west and travelled over the Big Belt range to the Missouri, which he struck nearly opposite the pass of Lewis and Clarke, called Gate of the Mountains. From here he continued westward by the gorge of the Blackfoot river, and through Hellgate pass, following Hellgate river to its junction with the Bitterroot, coming to a rest at St Mary's mission, or Fort Owen, in the Bitterroot valley, where he found Rufus Saxton, who had been charged with the duty of establishing a depot of supplies at Fort Owen, and had

approached from the Columbia river side of the Bitterroot range, and who had left The Dalles of the Columbia on the 18th of July.

Saxton's party consisted of Robert McFeely and Richard Arnold, with Arnold and Hoyt, and forty-nine enlisted men and packers. The company followed the immigrant road as far as Walla Walla, whence they travelled in a northeast direction, crossing Snake river at the mouth of the Palouse, and keeping the same general course to the Spokane and Clarke fork, and up this stream to near the junction of the Bitterroot and Jocko rivers, where their route crossed over to the Jocko and thence south to St Mary's mission, where the party separated, Arnold being left in charge of the depot, and McFeely with nineteen men returning to The Dalles, by the Nez Percé trail, which ascended the Bitterroot to near its head, and turned west through the mountains by the Lo-Lo fork of the Clearwater—a more difficult, although shorter, route than the first. Saxton proceeded to Fort Benton by way of the Blackfoot river and Cadotte pass, and on the 22d of September started with a party on a flatboat for St Louis. His report of the route to the Columbia caused Stevens to abandon his wagons at Fort Benton, and hasten his march over the mountains to the plains of the Columbia; and while Donelson was placed in charge of the main party, Grover was directed to make a survey of the Missouri from the great falls to the mouth of Milk river, Doty remaining at Fort Benton to take meteorological observations.

Donelson moved from Fort Benton on the 16th of September, travelling in a southwest direction, and crossing the Rocky range by Cadotte pass proceeded down the Blackfoot river to the depot of St Mary's mission, after which he travelled by the route first followed by Saxton, keeping along Clarke fork to a point twelve miles below Pend d'Oreille lake, and thence to the Spokane river. Soon after crossing

this stream he met the western division of the survey under George B. McClellan, and arrived at Walla Walla on the 6th of November.

McClellan was charged with the duty of examining the Cascade range for passes to Puget sound. His party consisted of J. K. Duncan, 3d artillery, S. Maury, H. C. Hodges, J. F. Minter, civil engineer, George Gibbs, geologist, and J. G. Cooper, naturalist, with the necessary men and animals. He left Fort Vancouver in July, taking a northerly course through a country for the most part densely wooded, to the Cathlapootle river, and thence in a generally east course south of Mount St Helen and Mount Adams; thence crossing the Ahtanam, Nachess, and Wenass rivers, up the valley of the upper Yakima to the Yakima pass; thence to the Kittitass; thence north to the Columbia, and up the right bank of that river to Fort Okanagan, examining Okanagan river and lake, from which their route was almost due east to Fort Colville, where they turned south to the Spokane, and there met Governor Stevens, with whom they proceeded to Walla Walla, and thence to Puget sound by the Columbia and Cowlitz rivers.

There were some routes examined by McClellan's assistants, Mowry travelling from the Wenass river south to The Dalles; and Hodges joining the expedition at Kittitass, from Fort Steilacoom on Puget sound. His course was easterly to the Puyallup valley, and up the same to the Nachess pass, and down the Nachess river. Gibbs made a partial examination of lands lying between Shoalwater bay and Puget sound, proceeding in December with a small party up the Willopah river about fifteen miles, in a canoe, and continuing toward the interior on foot for about the same distance, when he was forced to abandon the undertaking by the severity of the season and the character of the country. The western end of the survey was far more difficult, owing to forests and mountains, with heavy rains in winter, than

all the continent from the Rocky range to the Mississippi.

Of that part of Stevens' company left by him in the region of the Rocky mountains, Tinkham on the 10th of October left the main train on Jocko river to examine Marias pass, which he reached by travelling northward up the valley of the Flathead river, and along the west shore of the lake, crossing the dividing ridge by this pass, and proceeding southeast to Fort Benton. On the 1st of November he left Fort Benton, returning to the depot in the Bitterroot valley by the Gate of the mountains, soon after which he proceeded to Walla Walla by the Nez Percé trail at the head of the Clearwater, arriving on the 30th of December. On the 17th of January, 1854, he left Walla Walla with two Indians, and passed up the Yakima river to its source in the Cascade range, which he crossed by the Snoqualmie pass, proceeding down the Snoqualmie river to Puget sound, where he arrived the tenth day from Walla Walla.

Grover having completed his survey of the Missouri from Fort Benton to Milk river, to ascertain its navigability, returned overland to Fort Benton, October 7th, where he remained until January 3d, when he left with a dog-train for The Dalles, to examine the condition of the route during the winter months, following Donelson's trail via Fort Owen, Clarke fork, Walla Walla, and the Columbia river, successfully to his destination.

In the following May James Doty surveyed the route from Fort Benton along the eastern base of the Rocky mountains to latitude 49° 30′. He remained in the region between the Rocky and the Bitterroot mountains until the 7th of September 1854, or about one year, when he left for Olympia, travelling by the St Regis Borgia river, and Cœur d'Alene mission to Walla Walla, then up the Yakima river and through the Yakima pass to Olympia on Puget sound.

Mullan, during the winter of 1853–4, made several

reconnoissances, the first being to Fort Hall on Snake river. He ascended the Bitterroot to its source, and going through Clarke pass of 1806, travelled thence southeast across the headwaters of the branches of the Jefferson fork, and south by Henry river to his destination. On returning he diverged to the east, and passed the dividing ridge, going north to Deerlodge river, and down that valley to the Blackfoot river, and the fort. In March he examined a new route to Fort Benton, which was up the north side of the Missouri from Hellgate pass, returning by the same trail. In April he explored the country between the two principal mountain ranges as far north as the Kootenai river, and not until September did he leave the mountains, going via the Lo-Lo trail to Walla Walla.

Richard Arnold in the summer of 1854 surveyed a military road from Fort Steilacoom through the Nachess pass, over substantially the same route reconnoitred by Hodges in 1853. F. W. Lander also, in returning east, made a reconnoissance at the request of the people of Oregon and Washington, who desired to have laid out a railroad route in the general direction of the immigrant road along Snake river. Not being provided with the requisite means, his examination of the route was semi-authoritative and imperfect. The route recommended by him was to begin at Seattle, on Puget sound, and to run to the Columbia via the Cowlitz river, up the north side of the Columbia to opposite The Dalles, where it would cross to the south bank and follow the river up to where the usual immigrant road turned toward a pass in the Blue mountains through which it would run, traversing Grand Rond valley by the headwaters of Grand Rond and Powder rivers, descending Burnt river to Snake river valley, following that stream to the mouth of the Bannack, which it ascended, and crossing a divide to a tributary of the southern Malade which it followed to Bear river. Here it

would be directly north of Great Salt lake, and on the line of a railroad running west from the South pass.

In order to connect with the California route proposed by Senator Benton, about the 38th or 39th parallel, his route would have to be extended along the east side of Salt lake to the vicinity of Utah lake, at about 1,200 miles from Puget sound. Connection with a Pacific railroad through Bridger's pass might be effected on the plains of the great basin near Salt Lake City at a distance of 1,050 miles from Puget sound; or with a road through the South pass in 875 miles distance. But calling the whole distance 1,105 miles to the great basin, he estimated the cost at $26,775,000. His examinations it was said, "tended to confirm the opinion of the difficult nature of the route west of the South pass."

Stevens' report furnished many interesting details concerning matters not strictly appertainiug to the objects of his survey, and has been criticised as too discursive to be of the utmost value. But it should be remembered that he exercised a threefold official capacity, as governor of a territory awaiting his arrival to organize; as Indian commissioner, to treat with some of the most warlike tribes of the northwest; and as head of the expedition, much of the work of which must be entrusted to his assistants. His itinerary furnishes interesting reading, and is enlivened by some perilous adventures.

The results of the survey of the northern route may be thus summed up. The Lewis and Clarke pass was found to be 5,300 feet above sea level, and involved grades of approach of forty feet, and of descent of fifty feet, to the mile, which would require to be connected by a tunnel two and a half miles long. West of the pass the grade would be thirty-five to forty feet to the mile; from Hellgate to the Jocko fifty feet, with a somewhat steeper descent on the west, entailing heavy embankments. From there

to Clarke fork the work would be light. The amount of snow in the mountains was not great; and as to the country which was to support a railroad, it was beyond all praise in scenery, climate, and resources.

The cost of a railroad from Seattle to St Paul was estimated by Governor Stevens at about $117,121,000. The distance between termini was 2,025 miles which the ascents and descents would increase to 2,387 miles. The war department regarded Stevens' estimate as too low, and placed the probable cost at $150,000,000. Notwithstanding the enormous cost, and the wild state of the country to be crossed, much enthusiasm was aroused in the northwest by Stevens' speeches and writings on the subject of a northern Pacific railroad, his statements concerning the feasibility of the work being sustained by the reports of Evans, geologist, who accompanied the expedition to the Blackfoot country, and who remained for some time on the Pacific coast. Stevens himself wrote to the Memphis *Eagle* in 1853, while en route, that after a careful study of the question, he was satisfied that if feasible routes could be found, two railroads must of necessity be built—one to connect San Francisco with the central and gulf states, and another connecting Puget sound with the valley of the St Lawrence. He had, he said, no doubt about the southern road, and hoped there would be no delay in commencing it.

Governor Stevens, after organizing the territory of Washington, and making treaties with the Indian tribes in the region west of the Cascade mountains, went to San Francisco, where he addressed mass meetings on the subject of a Pacific railroad, proceeding thence by steamer to the national capital. For the purpose of completing his hitherto successful negotiations with the mountain tribes an appropriation was made for holding treaties in 1855, and on the 16th of June we find him leaving Walla Walla with a large train—the goods having been conveyed by

steamer to The Dalles, and thence to Walla Walla by keel-boats, the first used on the upper Columbia—convoyed by a company of forty dragoons under Archibald Gracie, and half a dozen soldiers under a corporal, looking for some Indian aggressors.

After trading with the Walla Wallas, Cayuses, and Yakimas he proceeded to the Spokane country via the Walla Walla and Touchet rivers, thence to the Tucañon, and down that stream to Snake river which was crossed at the mouth of Alpouah creek. finding the country everywhere remarkably fertile. From this point he marched to the Palouse, and up its valley in the direction of the Cœur d'Alene country, passing near the outlying spurs of the Bitterroot range, and close to Cœur d'Alene lake, and crossing St Joseph river to Cœur d'Alene mission, where they arrived in eight days from Walla Walla.

From the Cœur d'Alene mission he ascended the river of that name to its source, crossing the divide by Stevens' pass and following the St Regis Borgia river to its confluence with the Bitterroot, finding the grades sufficiently light, and the bridging feasible, although the streams required crossing frequently. After treating with the Flatheads, the expedition proceeded, July 18th, to Hellgate Rond, and encamped at the junction of Hellgate and Blackfoot rivers. There he ascended Blackfoot valley to the vicinity of Lewis and Clarke pass, establishing a line between the valley and the pass without the necessity of diverging by Lander fork of the Blackfoot—a point in the survey which had been left unsettled.

From the junction of Lander fork with the Blackfoot he ascended the latter five miles through a narrow valley to another fork on the north side leading directly to the pass by an easy grade, but found the nature of the approach on the east side of the range would render necessary a tunnel. The grade would not exceed about fifty feet per mile on the west side, but would be supplemented by 700 feet of cutting;

on the east side for two miles considerable embankment and numerous curves would be requisite, but the excavation of the tunnel would furnish material for the filling in, reducing the expense. The descent to Dearborn river would be made by side location and some rock cutting. Thence the route led across Sun river direct to Fort Benton, where he arrived July 26th.

Stevens did not approve the line reported by Lander from Sun river to the Teton, thence to the Marias, and thence to Milk river, but thought a line should be taken which would lead to the Missouri at Fort Benton, and thence to Milk river. His intention to make many careful observations on the return trip was frustrated by the news which reached him at the close of the Blackfoot council, of an Indian war in his territory which demanded his immediate return. He took the route via Cadotte pass and the Cœur d'Alene, travelling rapidly, and being diverted from railroad surveying by the exigencies of his office as governor and superintendent of Indian affairs.

The route finally adopted by Stevens, commenced at St Paul, crossing the Mississippi either at Snake rapids or St Anthony's falls, thence to Bois de Sioux, thence via Fort Union and Fort Benton to Cadotte pass thence by Hellgate and Bitterroot rivers to Cœur d'Alene mission, thence to the Columbia near the mouth of the Yakima river, thence up the Yakima valley and through the Snoqualmie pass to Seattle and Puget sound; with a branch down the Columbia to Vancouver and thence to Cowlitz river, and up that valley to the head of the sound. The estimated cost of one line, including six and a quarter miles of tunnelling, was $94,925,380, or with the Columbia river branch $120,595,380.

In 1856 General Tilton, commanding the Washington volunteers, ordered Major Van Bokelin to examine Lander and Snoqualmie passes of the Cascade, and decide upon the most practicable route for the

passage of troops. One party penetrated the mountains by Cedar river at Lander pass, and the other by the Snoqualmie, meeting near Lake Kittitass. The Snoqualmie was preferred, and several miles of road cut, when the troops were ordered to Port Townsend and disbanded. Many private exploring parties made examinations of the Nachess, Snoqualmie, and Yakima passes, and a military road was opened through one of them to connect with a road to Fort Benton, for which Mullan procured an appropriation in 1855.

The second expedition under the provisions of the act of 1853. was placed in charge of J. W. Gunnison, of the topographical engineers, assisted by E. G. Beckwith, 3d artillery; R. H. Kern, topographer; S. Homans, astronomer; J. Schiel, surgeon and geologist; F. Creutzfeldt, botanist; A. J. Snyder, assistant topographer; with the requisite teamsters and other employés. They were escorted by Captain R. M. Morris and Lieutenant L. S. Baker, with thirty men of the mounted rifle regiment. Like the Stevens expedition this was provided with sextants and artificial horizons, compasses, odometers, mercurial, and aneroid barometers, and instruments for railroad surveying, their supplies being transported in wagons.

Gunnison was instructed to survey near the 38th and 39th parallels. He left Westport, Missouri, June 16, 1853, the main train, taking the Santa Fé road, while Gunnison with a small party travelled up the Kansas river to Fort Riley, joining the train at Walnut creek, and proceeded up the Arkansas to Apishpa creek, up which they travelled, taking a westward course from there, crossing Cuchara creek, and striking Huerfano creek, ascending it to the Sangre del Cristo or Veta pass in the Sierra Blanco, and entering the San Luis valley at the head of the Rio Grande. Taking a northwest course from Fort Garland, they examined Roubidoux and Sandy Hill

passes, and reached the head of the valley at Saguache creek up which they proceeded to Coochetepa pass of the Saguache mountains, descending on the west by Coochetopa creek to the head of the south fork of Rio Grande. Finding it impossible to travel through the cañons of this stream, now known as Gunnison river, they were forced to keep on the high and broken mesas to the south until they came to Uncompahgre creek, a tributary which they descended to the main stream, finding a passable route to a crossing a short distance below. Proceeding northwest at some distance from the stream, and crossing the Bunkara or Blue river, now called the north fork of Gunnison river, near its junction with the south fork, they travelled not far from the bend of Grand river, and west across Green river to the head of San Rafael branch of Green river, where the unbroken Wasatch range compelled a detour to the south, a passage of the mountains being effected at the head of Salt creek fork of Sevier river. Following the Sevier river down to Lake valley, the expedition turned south, crossing the Unkukooap mountains, and struck the Sevier again just below where it emerged from the gap through the range. At this point the company separated into two parties, Gunnison, Kern, Creutzfeldt, William Potter, and eight men going to examine Sevier lake on the 25th of October. On the morning of the 26th while in camp they were attacked by Indians of the Ute tribe, and all killed except four of the enlisted men.

The command of the expedition then devolved upon Lieutenant Beckwith, who repaired to Salt Lake City to winter, and who wrote out Gunnison's report from the papers saved from the savages. In April 1854 he made an examination of the Wasatch mountains east of Salt lake, by the aid of F. W. Egloffstein and the surviving assistants of Gunnison. The party travelled up the eastern shore of the lake to the cañon of Weber river, and up this stream to White Clay

creek, where they crossed the divide between Weber and Bear rivers, and continued their march along the heads of Muddy creek and Black fork, as far as Henry fork of Green river, which they followed down nearly to its mouth. Retracing their steps to the divide between Muddy and Bear rivers, they explored for a route to Camas prairie and Timpanogos river more direct than that by White Clay creek and Weber river, but failed to discover any, being impeded by snow as well as the rough surface of the country. Returning to Weber they followed this stream to where it turns east into the Uintah mountains, thence crossing the dividing ridge they reached the Timpanogos river, which they followed to where it fell into Utah lake.

On the 5th of May Beckwith again left Salt Lake City under instructions to explore a route south of Great Salt lake in the direction of the sink of the Humboldt river, thence toward Mud lake and across to the tributaries of Feather river, thence by the most practicable route to the valley of the Sacramento. The route followed was across the Jordan river, around the northern end of the Oquirrh mountains into the Tuilla valley, around the northern end of an intervening range, and into Lane rock or Spring valley, thence southwest passing the Cedar and Schell Creek mountains to the valley of Franklin lake, whence their route was along the eastern base of Humboldt mountains to Hastings or Humboldt pass, through which they travelled to the head of the south fork of Humboldt river. From this point, while pursuing a generally west course, the route became devious, winding in among the frequent detached short mountain ranges, on the south side of the river, but turning north to the Humboldt meadows, and west from the meadows to Mud lakes. Proceeding northwest from the lakes Beckwith crossed the eastern chain of the Sierra Nevada by the Madelin pass, and proceeding north to the head of Pit river, followed it

to Fall river junction, where he took the immigrant road of 1848 running southward along the elevated plateau between the main sierra and the eastern chain, to Noble pass road, which he followed to Henry lake, and after a brief reconnoissance to connect his late with his former line of survey, passed westward through Noble pass in the main range to Fort Reading in the Sacramento valley. From Fort Reading he ascended the Sacramento to Pit river, which he followed almost to Fall river, nearly connecting this with his former reconnoissance, his explorations terminating with his return to Fort Reading via Noble pass.

Beckwith, unlike Stevens, was no enthusiast, and had furthermore been assigned to a roundabout route. His report did not favor it for a railway. For 650 miles west of the Missouri, to Sangre de Cristo pass, no timber could be found suitable for railroad purposes, nor was there any between Coochetopa pass and the great basin. Water was plentiful, except for seventy miles between Grand and Green rivers. He found no advantages of soil, climate, or population to recommend it in the face of the difficulties to be encountered, and the attendant expense of construction.

One acquainted with the history of the western immigrations, the settlements made by the Mormons at Salt lake and in Carson valley, the explorations of travellers and California residents, and the several semi-official surveys, already reported, with the various guide-books and itineraries, is amazed that a government expedition should have so much difficulty to find a fairly easy and practicable route across the continent. That part of Beckwith's report which refers to a route near the 41st and 42d parallels might have been taken from any one of half a dozen published descriptions of the immigrant route and cut-offs.

Commencing on the Missouri either at Fort Leavenworth, 245 miles from the Mississippi at St Louis,

or at Council Bluffs, 267 miles west of the Mississippi at Rock Island, it ascended the Platte and entered the Rocky mountains at the Black hills, by the north fork, and the Sweetwater at a point 520 miles from Council Bluffs and 755 from Fort Leavenworth, and so far did not differ materially from any route from the Missouri to the Rocky mountains. Going westward from this point, however, a railroad in order to avoid some gorges in the Black hills would cross a range 800 feet above the river from which it would descend to the Sweetwater, which it would follow to its source, thus gaining the summit plateau of the South pass at an elevation of 7,490 feet, 291 miles from the first gorge of the Black hills. This portion of the construction would be difficult and expensive, costing about as much as the Baltimore and Ohio railroad.

From the South pass the line would follow Sandy creek to the crossing of Green river, and thence would run to Fort Bridger, at an elevation of 7,254 feet, the work on this section being much less expensive than on the preceding: distance from Council Bluffs 942 miles, and from Fort Leavenworth 1,072. From Fort Bridger the route would ascend the valley of Black fork to the summit of the divide between Green river and Great Salt Lake, a broad terrace at the foot of the Uintah mountains with an elevation of 8,373 feet. From here the line would descend the undulating country between the Uintah and Bear river mountains, cross the head of Bear river, and follow White Clay creek from its head to its junction with Weber river. Between this point and the great lake was the Wasatch range, which might be penetrated by following Weber river, or by ascending to the head of the Timpanogos and following it down to the lake, the distance being about the same. In either case the road would pass to the south of the lake, crossing the Jordan, and the Tuilla and Spring valleys to the west side of the lake; the work on the

section not requiring a great outlay except in the cañon of the Weber.

From the western shore of Salt lake to the valley of the Humboldt, the country was described as consisting of a level plain crossed from north to south by short isolated ridges from 1,500 to 3,000 feet high, and rising gradually from the lake at an altitude of 4,200 feet to the base of the Humboldt mountains, 1,800 feet higher. On the west side of the mountains the country was similar and the elevation declined until at the base of the Sierra at Mud lake the height was but 4,100 feet, the whole distance from Salt lake to Mud lake being 600 miles. The mountain ranges abounded in springs and small streams, but were deficient in timber, only a scattering growth of trees being seen. The valleys presented a dreary aspect; they were covered with sage-brush, and not adapted to settlement and cultivation.

As to the road, immediately west of Salt lake it would cross a plain of mud, clay, and sand, impregnated with salt, seventy miles in width, thirty miles of which would require to be piled for the passage of a railroad; it would cross the Humboldt mountains by a pass nine miles long, three miles of which was through a narrow rocky ravine, along the sides of which the road would have to be carried on the sloping spurs of the mountains, the elevation here being 6,579 feet. Beyond this pass it would follow an open plain along the Humboldt 190 miles. From the bend of the Humboldt, which terminated in a marshy lake, or sink, the road would continue westward to the Sierra by the Noble pass wagon road, which crossed two ranges similar to those at the head of the Humboldt, and reached the Madelin pass of the Sierra west of Mud lake at an elevation of 4,079 feet above the sea. In this latitude the Sierra formed a plateau forty miles in width from east to west and 5,200 feet above sea level. It was crossed by irregular spurs and ridges, thinly covered on the east with

cedar and heavily timbered on the west with pine. The greatest elevation the road would attain in this pass would be 5,736 feet, but the descent to the Sacramento would be somewhat rapid, fifteen miles bringing it to Round valley, 1,300 feet lower. After leaving Round valley some formidable difficulties would be encountered in the cañons of the Sacramento, the first of which was fourteen miles long, the second nine miles, after which for ninety-six miles the river flowed in sharp curves through very precipitous and heavily timbered mountains, towering above it for 1,500 or 2,000 feet, and for 140 miles the construction would be attended with the greatest difficulty, and a heavy cost which it was impossible to estimate in the absence of any known means of comparison. After reaching the valley seventeen miles above Fort Reading, all difficulties would vanish, and the 250 or 300 miles to San Francisco bay would be easily constructed. The distance from Fort Bridger to Fort Reading was 1,012 miles; from Fort Leavenworth to San Francisco bay at Benicia 2,264 miles; and from Council Bluffs to Benicia 2,134 miles.

Other than topographical difficulties consisted in the scarcity of timber, which was found only in the Black hills, Wind river mountains, Uintah and Wasatch ranges, and the western slope of the Sierra Nevada. Coal had been, it was believed, discovered at Green river, and at the western terminus of the Puget sound branch. The cold of winter had been found to be very severe, with great quantities of snow in the mountains, and on the plains to the eastward. From the Sierra for 1,400 miles east the soil was unfit for cultivation with trifling exceptions in the settlements of the Mormons; neither was there much grass except along the watercourses. The estimated cost of constructing a railroad from San Francisco bay to Council Bluffs via the shortest known route on this line, 2,131 miles, was stated in the report to be $116,095,000.

Concerning the Tehachapi pass, by which a transcontinental railroad might possibly reach San Francisco, Beckwith could give no positive information, but said little was known of the country between that and the great basin, except that Frémont had termed it an "inhospitable region." The distance in a straight line from where Gunnison's survey ended to Tehachapi pass, inclusive of inequalities, was 464 miles, and from there to San Francisco 438 miles, making the total length of a road in this direction from Council Bluffs 3,025.

Beckwith ended his report with the promise that unless fresh instructions were sent him, he should in the following spring, 1855, attempt to carry out Gunnison's design of turning the range of mountains through which Sevier river passed, to the north, and if that were found impracticable he would go through the pass to Utah lake and Salt Lake City, examining the Timpanogos route.

In October 1853, an auxiliary expedition under Major Ebbetts and Lieutenant Moore, crossed the Sierra Nevada, entering between the north and south forks of the Stanislaus. They reached an elevation of 10,000 feet, passing by the south end of Walker lake, with the object of discovering a railroad route, but found this utterly impracticable.

The impression conveyed by Beckwith's report was unfortunate for the prospects of Frémont's 38th parallel route, and equally so for that on the 41st and 42d parallels. In fact he had encountered the worst of either, and had unintentionally misrepresented the character of the country west of Salt lake.

These impressions were modified somewhat by the report of Rufus Ingalls, quartermaster to Colonel Steptoe's command, which in 1854–5 marched from Fort Leavenworth via Fort Kearny, Fort Laramie, South pass, Bear river, and Salt Lake City where the command wintered, to the Sacramento valley and

thence proceeded to Oregon. It had been the intention to take a new route south of those usually travelled from Salt lake to California, but upon an examination made near that place, Steptoe determined upon following the usual emigrant route west of Salt Lake City, which led along the Humboldt to the sink, and crossed the Sierra at the head of Carson river.

Ingalls, with the heavy train turned northwest at Humboldt meadows, and journeying by the southern emigrant road to Oregon via the southern end of Goose lake and the Modoc lakes reached Fort Jones and Fort Lane without difficulty, finding an abundance of grass and water on the whole journey.

Lieutenant Mowry, also, who was detached from Steptoe's command at Salt Lake City, conducted some dragoons with their animals by the old Spanish trail from southern Utah to Fort Tejon, in California, but his report was not published.

The government gathered up the itinerary of various military road surveys, and expeditions in the Indian country which contributed any facts useful to an understanding of the railroad question, and they were compiled among the railroad surveys, as the map and notes of a survey by John W. Withers of the topographical corps, from Scottsburg, on the Umpqua river, to Myrtle creek in the Umpqua valley, through the Coast range of Oregon, in 1854; also the survey by G. H. Derby, in 1854–5, from Salem in Oregon to Astoria at the mouth of the Columbia, and from Fort Vancouver to Steilacoom; also the reconnoissance of G. P. Haller, 4th infantry, in 1855, from Fort Dalles via the immigrant road over the Bene mountains to Fort Boisé, and beyond to the Mormon settlement of Lemhi on the head of Salmon river.

At Camas prairie, Haller made a detour to Snake river on the south, and returning north to the junction of Camas creek with Malade river, which he followed to its source, crossing over to Godin or Lost river and proceeding thence in a northerly course to

Pashamarah creek, a branch of the Salmon river which he followed to its junction with the main stream, which he examined to the mouth of Lemhi or Mormon river. Returning, the expedition ascended the Salmon to its source, and taking a northwest course along the sources of the southern branches of this river, turning southwest from the south fork to the tributaries of the Payette river, which was followed to within twenty miles of its mouth, from which point Haller marched to Fort Boisé and thence to Fort Dalles by the usual road.

This expedition was undertaken to find and punish the Indians who had committed some outrages on immigrant families, and was the first military or other reconnoissance of the region which now constitutes the domain of Idaho that had been made since the march of the mounted rifle regiment through it in 1849. Afterward, during the several severe Indian wars, it became familiar ground; but no better route for a railroad from the vicinity of Salt lake to the Columbia river has since been discovered than that first travelled by fur companies and pioneer settlers.

From the Mississippi and Missouri westward in 1855 there were a number of military expeditions, all of which reported on the geography and topography of the country traversed. J. H. Simpson, of the topographical engineers, surveyed government roads from Point Douglas on the Mississippi to the mouth of St Louis river, which empties into the western end of Lake Superior; from Point Douglas to Fort Ripley in Minnesota; from Fort Ripley on Crow Wing river to Otter Tail lake; and from Mendota in Wisconsin to the mouth of Big Sioux river in Dakota. G. K. Warren, of the topographical engineers, while attached to the staff of General Harney in 1855, left St Louis June 7th and proceeded up the Missouri by boat to Fort Pierre, where a reservation was laid off for that post, and the Missouri examined as far up as

the mouth of the Cheyenne. From Fort Pierre he passed on to Fort Kearny in company with P. Carrey with six men and a single cart, arriving there on the 21st of August, fourteen days from the Missouri. Here joining Harney, he accompanied the army along the Platte to Fort Laramie, the expedition returning to Fort Pierre over a route along White river through the Mauvais terres or Bad lands, and the ridge between the Little Missouri and Big Cheyenne rivers. Warren accompanied a train from Fort Pierre, under Van Vliet, through Minnesota to the mouth of the Big Sioux, all these routes being measured and mapped. F. T. Bryan, accompanied by J. Lambert topographer, F. C. Larned and S. M. Cooper, assistant topographers, and C. Lombard, road surveyor, in 1855 surveyed the route from Fort Leavenworth to Fort Riley on Kansas river at the mouth of the Republican river, where they were joined by an escort under L. Armistead. On the 4th of August they left Fort Riley and proceeded west along the Kansas river to Saline fork, crossed it, followed up Smoky hill creek to its source, passed over Smoky hill fork, and thence southwest to Pawnee fork of the Arkansas. Proceeding up Pawnee fork to the source they crossed over to the Arkansas and travelled up to Bent's new fort at Big Timbers, returning to Fort Riley by nearly the same route, varied by moving north to Walnut creek which took them by a little more direct course home.

J. C. Amary, attached to the command of Lieutenant-colonel Morrison, left Fort Gibson, Indian territory, in 1855, with the command to examine the unexplored country to the northwest. Journeying up the Verdigris to the Kansas boundary, they left that river, striking the Arkansas at the mouth of Walnut creek, whence they kept along the usual route to Bent's fort, and returned. Major Merrill, 2d dragoons, also, the same year made a reconnoissance

from Fort Belknap, on the Brazos river, Texas, direct to Council grove and Fort Riley.

In June 1856, Lieutenant F. T. Bryan left Fort Riley in company with, and assisted by, J. Lambert, C. F. Larned, and S. M. Cooper, topographers, and H. Englemann, geologist, with thirty men, all escorted by a company of the 6th infantry under L. A. Armistead, and travelled up the Republican fork of the Kansas to the 40th parallel, when they crossed over to the Platte near Fort Kearny, and followed up this stream and the south fork to Lodge Pole creek, where the company divided, one part under Lambert ascending as far as Pawnee creek, which he examined to its source, and from which he proceeded west to the emigrant road, following which he rejoined the main party on Lodge Pole creek. A junction being then effected, the whole command proceeded west to the source of Lodge Pole creek, passing the Black hills and continuing westward south of Medicine Bow butte, crossed the Platte, and reached the divide between the waters of Platte and Green rivers near Bridger's pass. Returning, the expedition passed north of Medicine Bow butte, crossed the Black hills at the source of Cache à la Poudre creek, down which they travelled to the south fork of the Platte.

Lambert being detached at the head of Cache à la Poudre creek, proceeded east along the source of Howard creek to Crow creek, down which he travelled, making a junction with the main party at its mouth, when the whole expedition continued down the south fork to near Pawnee creek, whence it turned east to the Rock creek branch of the Republican fork of the Kansas river, which they examined down to the main stream, to Fort Riley, a detachment under Bryan, with Larned and Cooper having turned south about longitude 99° 30′ and explored the Solomon fork to its mouth.

John H. Dickerson also surveyed from Omaha to

the Platte, and along that river to Fort Kearny, connecting a line from the Missouri to Bridger pass, west of which were the surveys of 1854–5. W. D. Smith, with a squadron of 2d dragoons, also made a reconnoissance from Fort Kearny north to Fort Randall on the Missouri in 1856, and A. Sully, 2d infantry, attached to the command of Abercrambie, made a reconnoissance from Fort Ridgely, in Minnesota, west to Fort Pierre on the Missouri.

On the 16th of April 1856, G. K. Warren, of the topographical engineers, left St Louis by steamboat to join General Harney at Fort Pierre, accompanied by N. H. Hutton and J. H. Snowden, assistant topographers, and T. V. Hayden geologist and naturalist. At the fort he received orders to proceed on the American Fur company's boat *St Mary*, and examine the Missouri river as far as the steamer should go, returning by a Mackinac boat to Fort Pierre when the work was accomplished. His party consisted of the before-mentioned assistants, and thirty men, more than half of whom were enlisted from the 2d infantry. The *St Mary* ascended as far as the mouth of the Big Muddy, sixty miles above Fort Union. While waiting for a Mackinac boat to be built by the fur company the whole party explored the left bank of the Yellowstone to the mouth of Powder river, using wagons to convey their supplies. On the return to Fort Union, Hutton descended the Yellowstone in a bull-hide boat, mapping the stream as he went; and on returning down the Missouri a shore party with horses accompanied the Mackinac boat, all encamping together at night, and frequently halting for a day or more to examine streams of any importance, thus adding much to the value of the expedition, which reached Fort Pierre in October.

Great credit is due to the industry of the army topographers during three years following the authorization of Pacific railroad surveys, and for the reports

and maps furnished by military expeditions which were auxiliary to the transcontinental surveys. The central and northern routes were by this means pretty well understood in 1856.

Nor had the southern routes been neglected. On the 14th of May 1853 A. W. Whipple of the topographical engineers received instructions to make, with the assistance of J. C. Ives, explorations and surveys about the line of the thirty-fifth parallel for the construction of a railroad from the Mississippi to the Pacific. The expedition was ordered to proceed by the most favorable route in the direction of Rio del Norte to explore the passes of the Sierra Madre and the mountains west of the Zuñi and Moqui countries to the Colorado, and thence by Walker pass to the Pacific ocean at San Pedro or San Diego. A division of the party was to diverge to Albuquerque, to make that place a cardinal astronomical station, and to hasten the exploration of the New Mexico mountains before winter. Attention was especially directed to the water supply, and the state of the atmosphere, as also to the ethnology of the various native tribes encountered on the journey. The sum of $40,000, the same amount allotted to the Stevens expedition, was appropriated to defray the expense of this one, and Whipple was directed to submit his report before the first Monday in February 1854.

There was considerable difficulty in obtaining the necessary instruments for Whipple's survey, the demand owing to the different expeditions, of Perry to Japan; Ringgold in the north; Kane to the Arctic regions; and Stevens' northern Pacific railroad survey, who had gathered up what was left by the others. It was a not infrequent complaint in the reports of the numerous reconnoissances which have been mentioned, that certain instruments were lacking.

Meanwhile, to save time, Lieutenant Ives was sent forward by way of San Antonio and El Paso, at which latter place some instruments were available,

to Albuquerque, where he was to await the main party, employing himself in the interim, making astronomical magnetic and meteorological observations which might facilitate his subsequent work.

It was not until the 15th of July that Whipple marched out of Fort Smith, Arkansas, with his assistants, J. M. Bigelow, surgeon and botanist; Jules Marcon, geologist and mining engineer; Dr C. B. R. Kennerley, physician and naturalist; A. H. Campbell, assistant railroad engineer; H. B. Möllhausen, topographer and artist; Hugh Campbell, assistant astronomer; William White, jr, meteorological observer; George G. Garner, assistant astronomer; N. H. Hutton, assistant engineer; John P. Sherburne, assistant meteorological observer; and T. H. Parke, assistant astronomer and computer. They were escorted by a company of the 7th infantry under J. M. Jones, and a wagon train.

The route followed from Fort Smith ran west along the northern base of the San Bois mountains to the south fork of the Canadian river, which it crossed at Coal creek, following it to its head, and crossing Delaware ridge to the head of Boggy river. Recrossing the ridge it passed along the heads of Walnut and Deer creeks, and crossing a low divide, struck the False Washita at Gypsum creek, after which it returned to the Canadian, and followed the emigrant road up the valley to the Pecos, at Auton Chico. Here the party divided, Whipple with a small number following the Pecos nearly to its head, where he turned west through the Galiteo pass, and continuing down a creek of the same name, came to the Rio Grande at the pueblo of Santo Domingo, and followed it down to Albuquerque.

The main party took the route leading from Auton Chico up the Cañon Blanco to Las Lagunas, and thence through the San Pedro pass, at the southern end of the Zandia mountains, and down San Antonio

creek to Albuquerque, where the expedition remained encamped for a month.

About the middle of November, his escort increased by twenty-five men under J. C. Tidball, 2d artillery, and a great number of pack animals, Whipple resumed his survey. From Albuquerque he proceeded southwest to the crossing of Rio Puerco, and thence up the Santa Rita, on San José valley, to Covero. Soon after leaving Covero, Campbell, with a small party, explored a route up the Santa Rita to its head, thence through Campbell pass in the Sierra Madre to Fort Defiance, now Fort Lyon, and back to the main party at Zuñi, on the head-waters of Colorado Chiquito. From this point the exploration was conducted westward to the Rio Puerco of the west, crossing it near Navajo spring, and thence southwest to the Colorado Chiquito near the junction of the two streams. Following the Colorado about forty miles, it continued west from the bend of the river toward the San Francisco mountain, but passing south of this elevation, and north of Bill Williams mountain—instead of north of San Francisco and south of Bill Williams mountains, as in Sitgreaves' expedition of 1851—crossed the sources of some northern affluents of the Gila river to Bill Williams fork, down which it went to the junction of this stream with the main Colorado river.

The expedition now proceeded up the Colorado through the Mojave valley, crossing the river about latitude 34° 50′, and taking a northwest course to Soda lake, whence it passed by the valley of the Mojave river, through Cajon pass to the rancho Cucamonga, and along the foothills of the Coast range to Los Angeles, where it arrived March 25, 1854.

It could not be said that Whipple exhibited anything new in the way of railroad routes, although as a scientific survey the expedition was of value. He gave the elevation of the plateau east of the Rocky mountains at the head of the Pecos river at 6,940

feet. At Isleta on the Rio Grande the elevation was 4,945 feet. The Sierra Madre would have to be penetrated by a tunnel three-fourths of a mile long, at an altitude of 8,000 feet, before descending to the Zuñi river; or another pass twenty miles further north, Campbell pass, would afford a crossing at 7,750 feet. From here it was two hundred miles to the Aztec pass, which was 1,350 miles from Fort Smith, and 6,281 feet above the level of the sea. The Cajon pass of the Sierra Nevada would have to be penetrated by a tunnel two and a half miles long, at an elevation of 4,179 feet; and the descending grade for twenty-two miles would average 100 feet to the mile. The distance from Fort Smith to Los Angeles was 1,892 miles. In order to reach San Francisco, 482 miles further, the route would have to deflect from the Mojave valley about thirty miles east of Cajon pass, whence it would lead to Tehachapi pass, crossing it at a low elevation, and going by easy grades to San Francisco. A great saving of distance would be effected by this route if San Francisco were the terminal point. On the thirty-fifth parallel route, as well as on that pursued by Gunnison and Beckwith, there would be a scarcity of timber, water, and fuel, and also of stone over a portion of the route. Estimating the inequalities of surface, the distance to be constructed would be 2,816 miles to Los Angeles, or 3,137 miles to San Francisco; and the total cost might be set down at $169,210,265.

Whipple returned immediately to Washington to make his report, having sold the government property in his possession, there being no officer to whom he could turn it over at Los Angeles. That he was able to proceed without loss of time was due to R. S. Williamson, assisted by J. G. Parke, topographical engineers; G. B. Anderson, 2d dragoons; A. L. Herrman, physician and naturalist; W. P. Blake, geologist; Isaac W. Smith, civil engineer; Charles

Preuss, topographer; and Charles Koppel, artist. His escort was commanded by G. Stoneman, 1st dragoons.

Instructions were forwarded from the war department May 6, 1853, to Williamson, directing him to make a survey of the country west from the Colorado to the Pacific, with the object of discovering a route connecting the surveys of the 32d and 35th parallels with the Pacific ocean, $30,000 being appropriated for this survey. Williamson sailed from New York May 20th, arriving in San Francisco June 20th, leaving Anderson ill at Panamá. No time was lost in organizing the party, which left Benicia July 10th. Williamson's course after crossing the straits at Martinez was by the way of Monte Diablo, Livermore valley and pass, to San Joaquin valley, whence he ascended the Tuolumne river to Fort Miller, in the foothills of the Sierra, 174 miles from Martinez.

From Fort Miller he crossed an arid plain to King river, and thence to the delta of Four creeks, where he obtained a guide, the objective point being Walker pass. In order to make a thorough examination, a depot camp was formed at Poso creek, in Kern county. Above the cañon of Kern river the expedition struck a narrow creek, at the head of which was Walker's pass, which Lieutenant Williamson, after examining, condemned. East of this point for two or three degrees of longitude was a mountainous desert, devoid of wood, water, and grass. Any road from the east to this pass must come from the Vegas de Santa Clara, the Mojave, or the south, and in either case must cross this desert. The grades of the pass were such as to render a railroad impracticable, and any road west of it must descend the Kern river, the narrowness and sinuosity of which rendered a railroad there out of the question.

For similar reasons he rejected the next pass to the south. Its altitude was about the same as at Walker pass—5,300 feet—but steeper and less open. Then

came Tehachapi creek, called Pass creek by Frémont in 1844. This stream entered the Tulare valley between Kern and Tejon rivers, with an average descent of 157 feet to the mile for a distance of fifteen miles; but there were side slopes affording opportunities for decreasing the grade, and timber was here plentiful. The summit elevation was 4,020 feet. The fourth pass encountered in working south was crossed by Frémont in 1844, and was in a direct line with the Mojave, but was steep, having an ascent of 600 feet in less than two miles. It was considered a good pass for a wagon road, the ground being solid and firm in wet weather—the wagon road from Los Angeles to Visalia runs through it—but for a railroad, it would be better to travel further by an easy grade than to tunnel here.

Next followed an examination of the Tejon pass, still further to the south and west, where the Sierra Nevada, which bends southwestward from Walker pass, approaches the Coast range, and fences off Los Angeles, San Diego, and San Bernardino counties from the northern part of the state. There was a wagon road through this pass from Los Angeles to Kern river, but a very bad one. The survey of this pass occupied nearly two weeks, when it was pronounced impracticable, the grades being too heavy, even with a tunnel over a mile in length. Immediately below the pass of the Tejon, was the Cañada de las Uvas, the depression between the Nevada and the Coast ranges where they join at their base. The ascent to this point from the west was at the rate of 302 feet per mile for a distance of over five miles; thence to the summit 121 feet per mile; at the summit, 339 feet per mile; while the descent on the east side was 441 feet to the mile; after which a divide was encountered, separating the waters of the Pacific from those of the great basin, from which the descent for a short distance was 357 feet to the mile, and thence gradual into the basin. A tunnel would be

required at each of these summits. Of all the passes of the Sierra the Tehachapi and the Cañada de las Uvas were pronounced most practicable, and the former the better of the two. From here to the mouth of the Gila no serious obstruction to railroad engineering was encountered, but water was so rarely met with that it was evident artesian wells would have to be resorted to. Eastward as far as the Mojave no water was found after going thirty miles from the passes.

Attention being turned to the Coast range, Lieutenant Parks examined the San Fernando pass, near the mission of that name, this being the pass of the Los Angeles river through the Santa Susana mountains north of the town of Los Angeles, which was practicable for a railroad by means of a short tunnel. The present tunnel at this pass is two miles in length. San Francisquito pass at the head of Santa Clara river, in Los Angeles county, and the Cajon pass in the San Bernardino mountains were reported unfavorable, owing to steep grades and the amount of tunneling required. Warner pass and Jacum pass, both leading to San Diego, were pronounced impracticable. The San Gorgonio pass, between the San Bernardino and San Gorgonio mountains, was reported as the best of any in the Coast range, the grades being not difficult; and another called New pass, was discovered east of San Francisquito, which was also approved. The survey ended December 20 1853, at San Diego.

In Williamson's report he said that a railroad from the Mississippi to the Pacific via the mouth of the Gila would follow a nearly direct line to the San Gorgonio pass, through it to the San Bernardino valley, and from there to some point on the coast. But the only two good harbors in California were San Diego and San Francisco. From San Bernardino to the latter point the road must either follow the coast, or it must recross the Coast range, cross the Sierra, and enter the Tulare valley. This route was practicable,

but the coast route was still unsurveyed. To follow the route by the Mojave and Los Angeles, it would be necessary to cross from Los Angeles valley to the valley of the Santa Clara, and thence by New pass to the great basin, and over the Tehachapi pass into the Tulare valley, whence there was no obstruction to the bay of San Francisco; but to reach the city of San Francisco it would be necessary to cross the Coast range, which had been instrumentally explored only at two points, but which could no doubt be easily crossed at Pacheco pass, at the head of Pajaro river, whence the road would run through the San José valley, and to the city itself. The distance from the mouth of the Gila to Martinez by the first of these routes would be 680 miles, and about the same by Pacheco pass.

To reach San Diego from the mouth of the Gila, the railroad must go through San Gorgonio pass, and along the coast, turning the mountainous country which lies to the south, Warner pass not being available. The distance to San Diego from the Gila would be 315 miles. He had previously said there was no practicable pass through the mountains to San Diego, or impliedly, to the coast, in this latitude. Or should the road strike the Colorado above, and crossing the basin around the Mojave river to reach San Francisco, it would leave the river twenty-five miles below where the Spanish trail strikes it—that is, below Rio Vírgen—and run directly west to Tehachapi pass, avoiding the Cajon pass, which Lieutenant Whipple had accepted. This particular examination of the California passes was of great interest to the people of the state, as well as instructive to the heads of government, and congress. As in the case of the central and northern survey the southern survey was supplemented by several shorter ones.

Among these was the reconnoissance of J. G. Parke, assisted by H. M. Custer, topographer, and A. L. Herman, physician and naturalist, for which

$5,000 was appropriated. The party left San Diego January 24, 1854, with twenty men, exclusive of an escort under Stoneman of twenty-eight dragoons. They followed the immigrant road via Warner's rancho and pass, and across the Colorado desert to Fort Yuma, and crossing the Colorado proceeded up the left bank of the Gila to the Pima and Maricopa villages. Thence they turned southeast to the Mexican towns of Tucson and San Xavier; and continuing southeast passed through the Cienega de las Pimas to the Rio San Pedro, following up that stream about forty miles, and striking over the hills on the right bank to the Playa de las Pimas, and crossing it at its southern end entered the Chiricahui mountains, at the Puerto del Dado, south of Dos Cabezas peaks. Thence by an east course they crossed the mountains on the eastern side of the Valle de Sauz, near the Gavilan peak, and here turning northeast, crossed the next mountain range near Pyramid peak, and proceeded east to Ojo de Inez, near which they came into Cooke's wagon road, which they followed to Fort Fillmore. After examining a route direct between Fort Fillmore and Cooke spring the expedition disbanded at El Paso. This exploration was more nearly on the 32d parallel than any other railroad survey. The distance from the Rio Grande near Fort Fillmore to the Gila at the Pimas villages was 360 miles; from the Pimas villages to the mouth of the Gila 223 miles; thence to San Gorgonio pass 133 miles, and thence to San Diego or San Pedro 125 miles; making the total distance from the Rio Grande to the coast of the Pacific 841 miles.

John G. Pope, of the topographical engineers, was directed, early in October 1853, to make a reconnoissance, assisted by K. Garrard, 1st dragoons; J. Mitchell, surgeon and naturalist; C. L. Taplin and J. H. Byrne, topographers, and escorted by twenty-five men of the 3d infantry, under L. H. Marshall. The party,

including helpers and teamsters, numbered seventy-five persons, and was well provided with instruments. The amount appropriated for the survey was $15,000.

The expedition left Dona Ana on the Rio Grande near Fort Fillmore, February 12, 1854, passing through the Organ mountains southwest to the pass at Carro Alto in the Hueco range, where the expedition divided, Garrard being sent to El Paso to connect the two points of survey, while Pope moved eastward to the Guadalupe pass by the way of Carnudas de los Alamos. Garrard explored the Guadalupe range for some distance to the south, and joined the main party at the head of Delaware creek. On reaching the Pecos, Marshall explored the country up to the mouth of the Sacramento, and Taplin was sent across the Llano Estacado to Sulphur springs. The main party then moved down the Pecos to the emigrant crossing, and thence by the usual road to the Big springs of the Colorado of Texas. Here again Garrard was sent back to the mouth of Delaware creek to survey a direct route between the two places. From Sulphur springs the whole party followed a direct course to Fort Belknap, thence northeast to the west fork of Trinity river, and thence eastward to Preston, Mississippi.

In his report Pope considered that the proper eastern terminus of the road should be at Fulton, in Arkansas, instead of at Preston. In the first section of the route, from Red river to the eastern base of Llano Estacado, 352 miles, the heaviest grade was 66 feet for six miles, at the crossing of the divide between Red and Trinity rivers, but it could be reduced indefinitely by engineering. Timber and building stone were abundant along the whole section between Trinity and the Llano. The route crossed navigable streams, and in all respects was one in which construction would be easy and economical. The cost of this section he estimated at $17,600,000. The second section of 125 miles to the Pecos had

upon it neither wood nor water, but limestone and sandstone were abundant. The summit level of the plain was 423 feet in a distance of 89 miles, no excavating or banking being required. The descent to the Pecos was rather more rapid, being 18 feet to the mile for 35 miles. The cost of constructing this section would probably be about $5,000,000. From Rio Pecos to Rio Grande at El Paso was 169 miles. This section consisted of elevated table-lands, crossed by three ranges of considerable altitude, the Guadalupe, the Hueco, and the Organ mountains. The Hueco mountains would require a grade of fifty-seven feet on the east, and seventy-nine feet on the west, beyond which there was almost a level, except where the plateau descended to the river. Pope recommended Molino as the better approach to the Rio Grande, whether it was intended to bridge it at this point or not, but it was the most favorable point for bridging, owing to the bed and banks of the river being rocky. The cost of this section of the road he estimated at $10,400,000, to which might be added $7,000,000 for the extension of the road from Red river to Fulton, 133 miles. He suggested the examination of two additional lines between the Pecos at the 32d parallel, and the Rio Grande at El Paso, one turning the Guadalupe range to the north through the valley of the Sacramento, and the other passing south of this and the Hueco range and leading to Molino on the Rio Grande. Pope's survey was intelligently conceived and carefully carried out. Taking his estimate of distances together with Parke's—841 miles from San Diego to the Rio Grande, and 779 miles from the Rio Grande to Fulton—this line was shorter than any of the others, being but 1,620 miles from the Mississippi to the Pacific. To San Francisco bay the distance would be about the same as by the northern route to Puget sound, but the estimated cost would be less, as the following statement explains.

TABLE SHOWING LENGTHS, SUMS OF ASCENTS AND DESCENTS, EQUATED LENGTHS, COST, ETC., OF THE SEVERAL RAILROAD ROUTES EXPLORED BETWEEN THE MISSISSIPPI AND THE PACIFIC.

ROUTE.	Distance by air-line.	Distance by proposed Railroad route.	Sums of Ascents and Descents	Length of Level Route of equal Working Expense.	Comparative Cost of the different Routes.	No. of Miles of Route through Arable Land.	No. of Miles of Route through Land generally uncultivable, arable soil being found in small areas.	NUMBER OF MILES AT AN ELEVATION ABOVE THE SEA.									Altitude above the Sea of the highest point on the route	REMARKS.
								0 to 1,000 feet.	1,000 to 2,000 feet.	2,000 to 3,000 feet.	3,000 to 4,000 feet.	4,000 to 5,000 feet.	5,000 to 6,000 feet.	6,000 to 7,000 feet.	7,000 to 8,000 feet.	8,000 to 9,000 feet.	9,000 to 10,000 feet.	
	Miles	Miles	Feet	Miles													Feet	
Route near 47 and 49 parallels, from St. Paul to Seattle.	1,410	2,025	18,654	2,378	$140,871,000	535	1,490	470	580	720	130	97	28	.....	.....	.....	.....	6,044	Tunnel at elevation, 5,219 ft.
Route near 47 and 49 parallels, from St. Paul to Vancouver.	1,455	1,864	17,654	2,198	130,781,000	374	1,490	309	580	720	130	97	28	.....	.....	.....	.....	6,044	Tunnel at elevation, 5,219 ft.
Route near 41 and 42 parallels, from Council Bluffs, via South pass to Benicia.	1,410	2,032	29,120	2,583	116,095,000	632	1,400	220	170	210	160	590	285	270	107	20	.....	8,373	
Route near 38 and 39 parallels, from Westport, via Coo-che-to-pa and Tah-ee-chay-pah passes, to San Francisco.	1,740	2,080	49,985	3,026	Impracticable	620	1,460	340	276	165	348	466	170	60	155	80	20	10,032	Tunnel at elevation, 9,540 ft.
Route near 38 and 39 parallels, from Westport, via Coo-che-to-pa and Madelin passes, to Benicia.	1,740	2,290	56,514	3,360	Impracticable	670	1,620	275	308	190	148	725	284	110	155	80	20	10,032	Tunnel at elevation, 9,540 ft.
Route near 35 parallel, from Ft. Smith to San Francisco.	1,550	2,096	48,521	3,015	106,000,000	646	1,450	585	290	261	236	181	295	222	26	.....	.....	7,550	
Route near 35 parallel, from Ft. Smith to San Pedro.	1,360	1,820	48,862	2,745	92,000,000	420	1,400	354	292	236	210	185	295	222	26	.....	.....	7,550	Tunnel at elevation, 4,179 ft.
Route near 32 parallel, from Fulton to San Francisco, by Coast route.	1,630	2,024	38,200	2,747	90,000,000	834	1,190	893	347	120	342	271	50	.....	.....	.....	.....	5,717	
Route near 32 parallel, from Fulton to San Pedro.	1,400	1,598	30,181	2,169	68,000,000	408	1,190	478	337	120	342	271	50	.....	.....	.....	.....	5,717	
Route near 32 parallel, from Fulton to San Diego.	1,360	1,533	33,454	2,167	68,000,000	374	1,159	420	305	125	362	271	50	.....	.....	.....	.....	5,717	

Congress on the 31st of May 1854, appropriated $40,000 to make up deficiencies in the Pacific railroad surveys of the previous year, and in the following August made a further appropriation of $150,000 to carry on the work for another year.

Instructions were forwarded in October 1854 from the war office to J. G. Parke, directing him to continue his surveys for a Pacific railroad. He was required to make such explorations as would determine the practicability of a railroad from San Francisco bay to Los Angeles; to explore the Mojave valley and discover whether it joined that of the Colorado, determining its capabilities as a railroad route; to explore the line recommended by Whipple, from Soda lake and Mojave valley to the Colorado river, via the Chemehuevis valley; and to make additional explorations between the Pima villages and the Rio Grande, as recommended in his former report. He was directed to give special attention to the geology of the country with a view to determining the probabilities of a water supply for railroad and irrigation purposes. The amount set apart for this expedition was $39,000.

Lieutenant Parke and his assistants arrived at San Francisco from New York November 1st, and on the 20th left Benicia to commence the survey at San José. Thence they proceeded in wagons through the Santa Clara valley to the Pajaro valley, which was examined as far as Monterey bay. Ascending the Salinas river to a point about nineteen miles above Soledad, the party divided, one portion going over the hills via the San Antonio, and the other keeping up the Salinas valley to San Miguel, where they reunited. A depot camp was established at Santa Margarita, and thirty days were devoted to an examination of the surrounding country, including the Salinas valley, followed by a survey through San Luis pass of the Santa Lucia mountains to San Luis Obispo, and thence to the beach at the mouth of Arroyo Grande.

From San Luis Obispo the expedition crossed Guadalupe Largo to Santa Inez mission, and thence by Gaviote pass of the Santa Inez mountains proceeded to Santa Bárbara; a part however taking the San Marcos pass, exploring to the head of the Santa Inez river, with good results. Proceeding to San Buenaventura mission, the expedition attempted to cross the mountains to Cuyama plain, but failed, whereupon they went up the Santa Clara valley to San Francisquito rancho, where a party was organized to explore the Cuyama plain from which they passed into the Tulare valley through the Cañada de las Uvas, and thence to the north of Santa Emila mountain, but found after two weeks' examination this route impracticable. Returning down the Santa Clara to the coast the whole party arrived at Los Angeles by the coast road March 20, 1855, four months from Benicia.

From Los Angeles Parke proceeded east to and through the Cajon pass, where, leaving the main body, he took a small detachment and followed the Mojave river to its sink in Soda lake, between which and the Colorado there lay a desert, on which no water was discovered except along the route already pursued by Whipple, and from which he turned back to Los Angeles without venturing to explore the waterless Chemehueva plain stretching 110 miles to the southeast.

The expedition was reorganized in May at San Diego, for a march to the Gila, taking the usual wagon road to Fort Yuma, and thence up the Gila to the Pima villages. Here it divided, a part taking the wagons, via Tucson, to the crossing of the San Pedro river, and the remainder proceeding with pack mules up the Gila to the mouth of the San Pedro, and up that stream to the crossing, where they were reunited. Thence they advanced to the Playa de las Pimas, where they again separated, one taking the road through the Puerto del Dado, while the other

passed between the Chiricahui range and Mount Graham, again uniting in the Vallé del Sauz, and continuing eastward around the north end of Pyramid ridge and ascending the southern spurs of the Burro mountains reached the immigrant road. Entering the cañon leading from the Ojo de Inez they proceeded via Las Peñasquitas, Ojo de la Vaca, and Rio Mimbres to Cooke's spring, making lateral examinations on the route. From Cooke spring the expedition repaired to Fort Fillmore, where it disbanded.

The result of Parke's survey was to confirm the value of the surveys of the previous year. Beginning at the eastern end of his route, which crossed the Rio Grande below Frontera, it ascended the river valley to near Mesilla, by a grade of 36 feet in as many miles when it turned west, ascending the elevated plateau by terraces, the first having a grade of 20 feet per mile for four miles, the second 60 feet per mile for over five miles, and thence to the summit a distance of nine miles, the grade was 28 feet. Having surmounted the *mesa*, there was little difficulty for 138½ miles to Vallé del Sauz, the maximum grade being 64 feet per mile, at the crossing of the Pelancillo summit, which could be easily reduced by increasing the distance. From Vallé de Sauz to the mouth of the San Pedro the route was due west, passing between Mount Graham and the Dos Cabezos division of the Chiricahui range by Railroad pass into the Playa de las Pimas, the grading of which pass need not exceed 60 feet per mile, after which it crossed an immense plain to the headwaters of Aravaypa, a tributary of the San Pedro, which it followed by a descending grade of 40 feet per mile to the entrance to the cañon, where it increased to 63 feet. Following the main San Pedro down to its confluence with the Gila, the descent was only fifteen feet per mile. From the mouth of the San Pedro to Maricopa wells on the Gila the descent was trifling, the blasting of some rocks in Gila cañon being the greatest difficulty

to be overcome in constructing a road. Water, however, was scarce, and there was not timber enough for construction purposes of the right quality.

Parke estimated the cost of the road between Rio Grande and the Pima villages, 345 miles, at $15,134,000, or an average of $43,866 per mile; between the Pima villages and Fort Yuma $4,008,000. In summing up the thirty-second parallel route, Parke divided it into eastern, central, and western sections; the first, as surveyed by Pope, extending from Fulton on Red river to Molino on Rio Grande, 787 miles, with an approximate cost of $31,575,000. In order to connect this with the central division at Frontrera the road must ascend the river five miles to that point, which additional distance, with the bridge, would raise the cost to $31,812,000. The central section from Frontrera to Fort Yuma 545 miles, adding $480,000 for 32 miles of road up the Rio Grande valley, would cost $19,622,000.

The cost of the western section depended on whether San Diego or San Francisco were adopted as the terminus of the road. In the latter case, the route from Fort Yuma to Los Angeles as surveyed by Williamson in 1853, with a length of 238 miles, had been estimated by Humphreys to cost $10,710,000. From Los Angeles to San Francisco, via the coast route, was 396 miles and would cost $20,668,750, making the total length of the western section, the terminus being at San Francisco, 634 miles, and its cost $31,378,750.

As to the San Diego route, since Williamson's survey there had been a more detailed examination of the same ground under local auspices, which gave the estimated distance from San Diego to Fort Yuma at 189 miles, and the total cost $7,571,500. But applying the same standard here that was applied to the more difficult portions of the route in other sections, that estimate must be increased to $10,830,000. The total length of the route from Fulton to San Diego

was 1,527 miles, and total estimated cost $62,264,000. From Fulton to San Francisco it was 1,972 miles, at an estimated cost of $82,812,750.

As a transcontinental route the thirty-second parallel possessed considerable advantages in length—to San Diego—in elevations, and in climate. The light grades would admit of rapid construction. The material and supplies could be delivered at the crossing of the Colorado by steamer from the gulf of California, allowing parties to work both ways from Yuma. The disadvantages were the same as on other routes—a scarcity of wood and water. It was Parke's opinion that the road could be constructed in eight years.

Instructions were forwarded to Captain Pope in January 1855 directing him to ascertain the practicability of constructing artesian wells on the plains of Mexico and Texas. The space experimented upon contained an area of about 10,000 square miles. No great success attended the experiments, which were continued two seasons. Water was several times reached, but at so great a depth that the tubing nearly always gave out, or the water failed to rise to the surface when found. The depth at which water was found on the Llano Estacado was 360 feet; on the Jornado del Muerto east of the Rio Grande, 245 feet, and at 676 feet water rose to within 110 feet of the surface.

During this examination Pope modified his former railroad survey somewhat, finding no better pass, however, than that of the Guadalupe, but discovering where a grade of 108 feet could be lowered to 80 feet. He also found water and pine timber at no great distance from the pass, and examined two new routes from Ojo del Cuerbo to El Paso; one passing the Waco mountains with a maximum grade of 60 feet, and a summit level 200 feet lower than the former route; and the other avoiding the Waco mountains and reducing the grade to forty feet, but lengthening

the road ten miles. Topographical and geological surveys were made of the Jornada del Muerto, and the country between the Rio Grande and the Mimbres, and rivers of the Organ mountains.

On the 16th of August 1856, E. L. Hartz, 8th infantry, with three non-commissioned officers and twenty-four men, and a couple of army wagons, left Fort Davis, Texas, to intersect the El Paso road, which he struck twenty-five miles west of Eagle springs. He found the route nearly destitute of water, and the Carrizzo pass difficult for wagons.

A three years' study of the southern route had made it well and favorably known in congress; at least better known, and more favorably regarded than either of the others. There were, however, some other points in connection with the railroad that it would be well to settle, and one was the navigability of the Colorado river below the crossings.

When Lieutenent Williamson, in 1854, was engaged in surveying the thirty-fifth parallel route, he formed the opinion that the Colorado was navigable by steamers of a light draught. In 1857 the secretary of war directed J. C. Ives to organize an expedition to examine the river, and to commence it in December when the water was at its lowest stage. A suitable iron steamer was constructed in Philadelphia, which was shipped to San Francisco from New York in August, and arrived at its destination early in October.

The Colorado expedition was composed of Ives, in command; A. J. Carroll, steamboat engineer; J. S. Newberry, physician; F. W. Egloffstein, topographer; Möllhausen, artist and naturalist; Taylor and Booker, astronomical and meteorological assistants; and an escort of twenty-five men under Tipton, 3d artillery. The expedition left San Francisco in three divisions; one under Newberry sailed October 28th for San Diego, where a mule train was procured, and the

party marched to Fort Yuma across the desert; another left at the same time for San Pedro, to collect more mules at Fort Tejon, and proceed to Fort Yuma; while the remainder, under Ives, embarked with the surveying steamer on board the schooner *Monterey*, November 1st, and proceeded to the mouth of the Colorado where it arrived on the 29th, and at a suitable spot the steamer was taken ashore, put together, and named the *Explorer*. It was the 31st of December before this part of the expedition was ready to commence explorations, and the 9th of January before the *Explorer* arrived at Fort Yuma, 150 miles from the mouth of the river.

According to the statement of the Indians the water was lower than ever before known; and to lighten the steamer the arms, ammunition, baggage, and provisions were reduced to the least possible quantity, but the heavy machinery would not allow it to be trimmed to draw less than two and a half feet. The voyage up to the mouth of Bill Williams fork was a continual struggle with difficulties, and navigation was finally brought to a full stop at the Black cañon, about 500 miles by water from the gulf of California. Here the river party was joined by the escort and pack train March 18th, about one month from Fort Yuma. The trail had been bad, grass scarce, and Indians troublesome, being incited to hostilities by the Mormons, who were then at war with the United States.

While at this point a reconnoitring party discovered a practicable road to the summit of the Opal mountains, nineteen miles distant, which with a moderate amount of labor could be made passable for wagons, and from the summit extended a sloping plain to a gap a little north of the Vegas on the old Mexican trail to the coast. The whole expedition then moved down the river as far as the Mojave valley, where on the 23d of March they divided, one part descending the river in the *Explorer*, while Ives

and Tipton set out to explore the region between the head of navigation on the Colorado and Fort Defiance, on the headwaters of the Zuñi fork of the Colorado Chiquito.

Their march across the Colorado plateau was difficult and hazardous on account of formidable side cañons of the great and little Colorado rivers, and the extensive deserts which lay in their course until they reached the 35th parallel near Bill Williams mountain. Turning north and striking the base of San Francisco mountain, they reached the Colorado Chiquito—which by Ives is called Flax river—on the 2d of May, where the party divided, the greater number and Tipton taking Whipple's trail to Zuñi, and thence to Fort Defiance, while Ives with the remainder pursued a northward course to the Moqui pueblos, missing his course on the desert, and turning back to the river, which he followed to his destination. After visiting all the pueblos, and traversing the Navajo country, he returned, reaching Fort Defiance May 23, 1858.

From this post the whole expedition, excepting Ives, crossed the plains to Fort Leavenworth, and thence continued to the seaboard. Ives returned to San Diego by the overland mail route, then recently established. He found the *Explorer* had been sold to the transportation company supplying Fort Yuma, and returned to New York.

The results of this exploration were thus summed up: the distance from the mouth of the Colorado to Fort Yuma was 150 miles by water, and half that distance by land. The shifting of the channel, the banks, and the sand-bars, was continual and rapid; width of the river from one-eighth to one-half of a mile; depth from eight to twenty feet, except on the bars, where frequently there were no more than two feet; current two and a half miles an hour; navigation most easy in May or June when the river was rising and before new bars were formed. Above Yuma obstruc-

tions were more frequent, and more rocks were encountered. In some places there were flats where the water was spread over a wide surface, bristling with bars and snags. From Yuma to Bill Williams fork was 190 miles by river. Thence to Pyramid cañon 100 miles, the river was narrower, and the navigation better, being only obstructed by occasional gravelly shoals. From Pyramid cañon to Black cañon was sixty miles, and the river in this section was difficult of navigation, rapids being frequent, with a strong current, sunken rocks, and from eighteen inches to two feet only of water. Boats drawing no more than twenty inches might at all times ascend or descend without lightening cargo.

Black cañon was twenty-five miles long, and contained a rapid for every mile, and an attempt to penetrate it with a steamer would be attended with considerable danger at the most favorable season. The river above the cañon was impracticable.

Ives recommended an iron stern-wheel boat, drawing no more than twelve inches when light, with large and powerful boilers, a smooth flat bottom, and a hull divided by water-tight bulkheads. Such a boat might be 100 feet long, and 22 feet beam, with a stern-wheel 18 feet in diameter; it might make the trip to the head of navigation and back, in from twelve days to five weeks, according to the stage of water. Fuel was found to be abundant, consisting of cottonwood, willow, and mezquit. The cost of a boat such as described, which could carry sixty tons, would probably be about $20,000, and would last about six years, during which about fifty trips would be made at an annual expense to the government of $13,000, or $98,000 for the whole six years, the amount transported in that time being 500 tons yearly, at the rate of something over thirty dollars per ton.

Ives, who had married a niece of Secretary Floyd, made much of his Colorado expedition. The truth, however, was that George A. Johnson, who had a

contract for carrying government supplies to Yuma, and had run his boat up to the head of navigation—see my chapter on the history of Colorado navigation—on the river, had been of the greatest service to Ives in pointing out the difficulties to be encountered and how to overcome them. He also furnished him a pilot, D. C. Robinson, who had been five years on the river. Johnson had offered to convey Ives' entire expedition up to the head of navigation for $3,500, while it cost the government as conducted $15,000, and perhaps the official announcement of what was already well known was worth the difference. It was now plain that only a railroad could perform the transportation to the Pacific in this latitude.

On the 1st of May 1855 instructions were issued to Lieutenant Williamson to make certain examinations in connection with the proposed Pacific railroad, namely: to make such surveys as should determine the practicability of connecting the Sacramento valley with the Columbia river, either by way of the Willamette valley, or by that of Des Chutes near the eastern base of the Cascade mountains; and to search for a route across the Sierra near the source of the Carson, to connect with a possible railroad from San Francisco to Salt Lake City, having previously obtained every information from Colonel Steptoe and others who had crossed the Sierra in that vicinity. An escort of 100 men was ordered, and the sum of $42,000 set apart for the expenses of the survey. Williamson was authorized to purchase $300 worth of goods to be used for purposes of traffic with the Indians, and compensation for their services. Lieutenant Henry L. Abbott was appointed second in command of the expedition.

These two officers sailed from New York May 5th, and arrived in San Francisco May 30th. By the 9th of July the exploring party was organized, and on the 10th made a start from Benicia. They passed

through the foothills of the Coast range to Putah creek and Cache creek, crossed the Sacramento river at Frémont, in Yolo county, then ascended Feather river passing through Marysville, and arrived at Fort Reading in the upper Sacramento valley on the 21st, where they were joined by the escort under Gibson, Crook, and Hood.

On the 28th the expedition left Fort Reading and journeyed eastward to Noble's pass, and thence north over Cooke's ground to Pit river, and thence by Wright and Rhett lakes to the Klamath lakes, reaching the upper one August 14th. After exploring in the vicinity, and passing north through the valley of Des Chutes, the party divided, and Williamson explored the Cascade mountains, and the branches of the Willamette river, arriving at Fort Vancouver October 9th.

Abbott meanwhile went next to Des Chutes valley, and thence to Fort Dalles, where he arrived September 10th, after which he made a reconnoissance of the Columbia as far as the Cascades. Returning to Fort Dalles, he made a second examination of Des Chutes valley. In the midst of this, October 3d, intelligence was received of an outbreak among the Indians on the north side of the Columbia, and that Major Haller, of Fort Dalles, had taken the field, while the scattered inhabitants of both sides of the river were fleeing to The Dalles.

Upon this information Abbott procured a guide and crossed the mountains by the Mount Hood road, rejoining Williamson's command at Oregon City, on the 19th. But Williamson himself had returned to San Francisco by steamer to prepare for an exploration of the Carson river pass of the Sierra Nevada, expecting his command, under Abbott, to march to meet him by the usual road to California, through Willamette, Umpqua, and Rogue River valleys. But Abbott was much inconvenienced by the detention of the dragoon part of his force by Major Rains at Fort

Vancouver to assist in the Yakima war; while another Indian war had broken out in southern Oregon along the road he would be compelled to travel; and only by the order of Governor Curry, directing the volunteer officers to supply an escort, if needed, in that part of the country, was he able to perform his part in the expedition. He marched with a body of volunteer troops until he met Captain Smith, 1st dragoons, from Fort Lane, on Grave creek, who furnished him with an escort to that post. On the 6th of November he crossed the Siskiyou mountains, and arrived at Fort Jones on the 8th. Proceeding up Scott's valley he struck the headwaters of a branch of Trinity river, which he followed, taking the trail to Fort Reading where he arrived November 15th. Here he was joined by Williamson, who pronounced the season too far advanced for the exploration of the Sierra, which had been anticipated by the state—see chapter on Roads—and when a few days later he received orders to return to Washington he disposed of his outfit, and reported at the seat of government in January 1856.

The report set forth that but one route had been examined from Benicia to Fort Reading, 200 miles. The greatest expense in construction for this distance would be in bridges, fifty-nine in all being required, varying from ten to three hundred feet in length. From Reading to the Columbia river two routes had been examined, both well supplied with wood and water, one east and one west of the Cascade mountains. On the east route no insuperable obstacle was encountered except in Des Chutes valley, which was impracticable on account of the cañon, 140 miles long, and in many places 1,000 feet deep. This cañon might be avoided by a pass into the Willamette valley near Diamond peak, whence to the Columbia the route was entirely favorable. The length of this line would be 600 miles from Fort Reading, 150 of which would be through a fertile and settled country. For

another 250 miles there would be little heavy work, but for the remaining 250 the expense would be very great. This would be in crossing the western chain of the Sierra Nevada, two cañons of Pit river, that portion of the road along the Upper Klamath lake, the cañon of the Klamath, and the pass through the Cascade range.

On the west side of the mountains the length of the line surveyed was 470 miles, 300 of which offered no difficulties, 100 of which would be very costly, and the remainder impracticable at any reasonable outlay, although it was not impossible that on a further survey, which was necessary, a feasible route might be found. The chief obstacles were in passing from the Sacramento to Shasta valley, and in crossing the Siskiyou and Umpqua mountains, the Grave creek hills, and Long's hill. Should the route west of the Cascades prove practicable, it would be preferable, being less elevated, having a milder climate, and passing through settlements. No estimates of cost accompanied Williamson's report, the itinerary of which forms very pleasant reading. It was at best but a hasty and imperfect reconnoissance.

UNIV. OF
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Oakes Ames

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CHAPTER IX.

LIVES OF OAKES AND OLIVER AMES.

ANCESTRY AND PARENTAGE OF OAKES AMES—THE EASTON SHOVEL WORKS—EARLY CAREER—COUNCILLOR—CONGRESSMAN—THE UNION PACIFIC RAILROAD—THE CREDIT MOBILIER—THE AMES CONTRACT—CONGRESSIONAL INVESTIGATION—TESTIMONY OF SENATORS—AN UNRIGHTEOUS VERDICT—DECEASE—TRIBUTES TO THE DEAD—OLIVER AMES—FREDERICK LOTHROP AMES—GOVERNOR AMES.

THOSE among my readers who have travelled on the cars of the Union Pacific may probably have observed at Sherman station, the highest point on the overland route, and more than 8,000 feet above the level of the sea, a monument some sixty feet square at the base, and about the same in height. On one of its faces is carved the portrait of a great financier and railroad artificer, and on another is the simple legend, "In memory of Oakes Ames and Oliver Ames." It was erected in accordance with the following resolution, unanimously adopted at a meeting of stockholders in Boston, on the 10th of March, 1875:

"Resolved, that in memory of Oakes Ames, and in recognition of his services in the construction of the Union Pacific railroad, to which he devoted his means and his best energies with a courage, fidelity, and integrity unsurpassed in the history of railroad construction, the directors are requested to take measures in coöperation with such friends as may desire to contribute, for the erection, at some point on the line of the road, of a suitable and permanent monument."

To the name of Oakes Ames was justly added that of his brother Oliver, a man whose judgment was of the soundest, and whose business ability was of the highest order. If to the former is due the credit of taking on himself a task from which others shrank in dismay, of pushing it onward to completion with an energy that never faltered, with a confidence that never failed, the latter, through his careful and judicious management, no less than by his financial aid, must share the honors of this noble achievement. Therefore, in relating the career of one, I give indeed the leading incidents in the career of the other; and there is no more instructive story than that which is to be found in the coöperation of these two brothers, differing in many points of character, and yet both possessed of the highest qualities of leadership. They were in fact necessary one to the other, for each possessed the qualities which the other lacked. While the one might be aptly termed the genius of progress, the other acted as a balance-wheel on his far-reaching and venturesome emprise, and together they formed a combination that was all but invincible. Without them, and others like them, would never in their day have been forged the link that binds the east and west in bonds that shall never more be severed. If it required all the pressure of civil war, all the assistance that a willing nation could render, to give form and shape to this gigantic undertaking, its success alone became possible because of the brave, undaunted spirits, who took on themselves a burden that none but they could bear.

Of other members of this family it is also fitting that the story of their lives should here be recorded; of Oliver, the son of Oakes, and Frederick Lothrop, the son of Oliver Ames the elder, the former known to fame as one of the most able, upright, and popular governors that ever administered the affairs of Massachusetts, the latter an ex-member of the Massachusetts senate, and one to whose skilful management

is largely due the successful working of the Union Pacific railway.

At Bruton, in the shire of Somerset, England, was the ancestral home of the Ames family, and thence, some fifteen years after the New England fathers set foot on Plymouth rock, William, the first one whose name appears in Massachusetts annals, removed to the settlement of Braintree. From his only son, John, is traced in direct descent, through five generations, the lineage of Oakes and Oliver Ames. Their grandfather, also named John, was a blacksmith and gunsmith of West Bridgewater, and from a time-worn account-book, dating back to 1750, we learn that about the year 1773 he added to his business the manufacture of shovels. The implements met with fair demand, for they were the best that the colony produced, though doubtless in these days they would be accounted clumsy articles, hand-shaped, cumbersome, and such as only a New Englander could wield. But in due time the business descended from father to son, and by the latter was so largely developed that his trademark was sufficient to command for his wares the markets of the world.

Oliver, the youngest son of John and Susannah, and the father of Oakes Ames, was born at West Bridgewater on the 11th of April, 1779. His education was begun at the district schools, though by far the most valuable part of it was received in his father's blacksmith-shop, where he acquired the industrious habits to which he largely owed his success in life. In April 1803 he married Susannah Angier, a descendant of Doctor William Ames, a well-known author and professor, thus uniting two distinct branches of the family. Soon afterward he removed his business to Easton, near which were the headwaters of the Taunton river, affording ample power for manufacturing purposes. It was up-hill work in these early days, for as yet there were no facilities for transportation, and material and manufactured

stock must be carried in a one-horse wagon to and from Newport, Providence, and Boston. Nevertheless, the business grew apace, until it became of its kind by far the largest and most prosperous in the world. Thus shop was added to shop, and the number of workmen constantly increased, until in time the one-horse wagon gave place to the four-horse team, and that in turn to the iron horse, which carried to and fro between Easton and Atlantic seaports car-loads of raw and manufactured goods.

In 1806 Mr Ames formed a partnership with the Plymouth firm of Russell, Davis, and company, though still retaining the superintendence of his Easton business. At Easton, also, he engaged in the manufacture of cotton in conjunction with David Manley; but his factory was burned, and to other reverses were added the effects of the war of 1812, severely testing his resources and capabilities, though finally he won for himself a sure and lasting success. To farming he turned his attention somewhat later in life. In 1828, and again in 1833–4, he represented Easton in the Massachusetts legislature, and in 1845 in the senate, somewhat against his will, for he was no lover of office, and accepted it only at the urgent request of his fellow-citizens. A man of splendid physique, of expressive and strongly marked features, and of dignified bearing, none were better known among his neighbors and townsmen, and by all who knew him he was respected and beloved. With rare force of will, with remarkable energy and industry, was combined a capacity for work which never wearied. Simple in all his tastes, as became one born to serious purpose, he was somewhat pronounced in his likes and dislikes, but always with an eye to the character of his associates rather than their station or condition. A unitarian in belief, he was strongly opposed to the rigid calvinism of his day, and yet subscribed freely to all religious institutions, for in his public as in his private charities he knew not the

restrictions of sect or neighborhood. After surviving the eighty-fourth anniversary of his birthday, on the 11th of September, 1863, he was buried in the village cemetery at North Easton, where sixteen years before his wife had been laid at rest.

Of the eight children of Oliver and Susannah Ames, Oakes, the eldest son, was born at North Easton, on the 10th of January, 1804. Here he passed the years of his youth and early manhood, assisting his father in the work of farm and factory, and attending in winter the district school, where, except for a few months' training at the Dighton academy, his education was acquired. After serving first as his father's apprentice and then as his foreman, he was admitted as a partner in the business; but long before that time he enjoyed a full measure of his parents' confidence, and became in fact their chief reliance; for with all his father's industry were united in him remarkable quickness of apprehension, inventive powers of the highest order, and a rare ability for the administration of affairs.

The discovery of gold in California and Australia largely increased the volume of business, which grew to enormous proportions, and brought with it corresponding profits. To this was added the demands incidental to railroad building, to the growth of manufactures and mining, to the multiplication of public works, and to a new and rapid movement of population from eastern and old world centres to Australian and Pacific shores. In South America, in the Sandwich islands, on the coast of Africa, articles bearing the trade-mark of the firm were also in demand, and orders from China were by no means of rare occurrence. The shovels made at their works were of every description, from the toy spade used by children to the huge coal and grain scoops required for the unloading of cargoes and elevators. From 20,000 dozen in 1845, the manufacture increased to 125,000 dozen in 1870, and in 1880, 3,000 tons of steel and iron,

with 5,000 tons of coal, passing through the hands of 500 workmen, were converted into these necessary implements.

Nevertheless it was not until his later years that Oakes Ames became a wealthy man, as wealth is now computed. True, he was rated as a prosperous man, and always lived comfortably, as comfort was then esteemed, though his house was more plainly furnished than is that of many a well-to-do mechanic of to-day. In his parlor were cane-seated chairs, with other furniture to match, and its floor was bare, except for the woven rug of list-cloth that lay in front of the fire. It was a frugal and well-ordered household, one in which every dollar was used to the best advantage, and every member had his allotted work.

Like his father, Oakes was a tireless worker, taking, it is said, only a single day's vacation until long past the age when other men have ceased to work. For many years he employed neither clerk nor book-keeper, relying always on himself, and believing that whatever must be well done should be done by himself. His business affairs he kept in his head, as did the elder Vanderbilt, using only a small memorandum-book in which he noted a few of the more important items. Only his children were admitted into his confidence, and these not entirely so, for he was somewhat self-contained and reticent, as is apt to be the case with men of his power and originality. While giving to all his sons a good education, he would not have them spend much time at college or university, for in his opinion the time thus expended was so much taken from the more serious duties of life. In a word, he was a man entirely devoted to business, so much so that he had but the briefest leisure for amusement or pastime, even for the pastime of reading; not that he was deficient in the taste for literature, but denied himself the time to indulge it.

Such was Oakes Ames when, at the age of fifty-six, he made his first entrance into public life. He

was then a man of imposing presence, over six feet in stature, with a weight exceeding two hundred pounds, broad-shouldered, and with a massive but well-proportioned frame; eyes of a grayish blue, brown hair, and features clearly outlined, expressing the force of will and strength of character whereby he made himself felt as a power in whatever he took in hand.

It was now the year 1860, and throughout the land was heard the moaning of the storm which was soon to sweep with the fury of a hurricane through the fairest portions of the union. To meet the threatened calamity, men equal to the occasion were everywhere in demand, and such a man was Oakes Ames. In the struggle which resulted in giving to Kansas her free institutions, he had already taken an active part, and in the conflict that was now impending would surely put forth his utmost efforts in behalf of the union cause. Thus, in the convention of the newly organized republican party, he was nominated without a dissenting vote as councillor for the Bristol district, and to this office he was elected almost without opposition. As one of the council of Governor Andrew he rendered most timely and valuable service, for on him more than all others the 'war governor' of Massachusetts relied at this stormy and eventful period in the history of state and nation.

A year or two later, when the fate of the union still hung in the balance, and victory had so far declared in favor of the south, he was urged to accept the nomination as congressman for the second district. At first he refused, for other candidates were in the field, and for a political career he had neither leisure nor inclination. But it was pointed out to him that never in the nation's annals was there a time when men of proved ability and character were so much needed at the head of her affairs; for on the loyalty and efficiency of her legislature, no less than of her armies, the national existence depended. To the solicitations of friends and neighbors were added those of

the governor and members of the council, and from all sides came the request that he would represent in congress the people of Massachusetts. At length, on the very eve of the convention, he yielded. The wildest enthusiam followed, several of those who had already come forward withdrawing from what they felt to be a hopeless contest. At the informal ballot he received two thirds of all the votes; at the next the nomination was made unanimous, and the popular vote by which he was elected not only gave him a fair majority, but was accompanied with many expressions of public esteem and confidence.

Entering the thirty-eighth congress, Mr Ames was reëlected four times in succession, serving in all ten years, with the greatest credit to himself, and to the perfect satisfaction of his constituents. During this period he was a member of numerous committees, including those on railroads, on roads and canals, on manufactures, and on revolutionary claims. In this capacity his business experience and soundness of judgment gave special value to his services, and there were none whose views carried more weight and received a more attentive hearing. Enjoying as he did the friendship and confidence of President Lincoln, who listened readily to his advice, he was one of the group of leaders who gave form and cohesion to the complex legislation of the time. But there are chiefs among chiefs, and as such Mr Ames was regarded, for there were none in whom the sentiment of pariotism was more deeply seated, none who were more respected for the wisdom of his counsel, for the fearlessness with which his views were expressed, and the firmness with which they were maintained.

Many were the eulogies pronounced by his colleagues long after their subject had passed from the scene of his earthly labors. Said James G. Blaine: "He was distinguished among his associates, both in and out of congress, for solidity and uprightness of character, for sterling sense, for sound judgment, for

extraordinary energy, and for manly courage." "In the community where his life was spent," remarked John E. Sanford, "there is little need to speak of his integrity as a man of business, or of his public spirit and influence as a citizen. All knew and remembered him as a man of large views, noble impulses, and generous sympathies. Whatever the cause or the measure, he was always to be counted on the right side. They remember, too, with grateful pride, his long and conspicuous service in the important public trusts which they again and again committed to his charge, and the great public works to which he devoted himself with a breadth of view, and absorbing faith and courage, a personal force, a self-sacrifice and success, for which there is hardly a parallel in the annals of private or public enterprise. But it is not for what he did, more than for what he was, that they who knew him best love and honor his memory. Oakes Ames was an honest man, straightforward in purpose and action, trustworthy in deed and word. The warp and woof of his nature were such that he could not be otherwise. There was no background in his character on which the sunlight could not be turned." And thus Wendell Phillips: "While he stood head and shoulders above all her representatives in furthering the material interests of the nation, he was equally distinguished above most of them by his clear view of what honor and justice demanded of us, and by his manly, outspoken, and self-sacrificing efforts to make that the law of the land. I held him always in special honor, and felt it a privilege to call him my friend, admiring his sturdy and straightforward honesty of life and purpose, as a type of what a true man in a republic should be."

Such were the opinions expressed of Mr Ames by his fellow-citizens and fellow-congressmen, and by the consensus of that opinion he was stamped as one of the noblest specimens of American statemanship, one without whose name no catalogue of the great ones of

his age would be complete. It was ever his aim to be as faithful in the discharge of his public duties as he had been in the conduct of his own affairs, and in no instance did he allow his private business to interfere with his obligations to those whom he represented in the councils of the nation. Under the heavy load of his responsibilities he was never found wanting, and on all doubtful and difficult questions his counsel was sought. To his country's cause he freely devoted his time, his talent, and his means, and by those who know him best in these years of tribulation and distress, it was said that no encomiums which man might utter could exceed the measure of his worth.

But the crowning achievement of Mr Ames' career, and one with which his name will ever be associated, was the construction of the Union Pacific railway, the connecting link between Omaha and the terminus of the Central Pacific. It was while a member of the committee on railroads that his attention was first directed to the project for a transcontinental thoroughfare, and none perceived more clearly that this was the great desideratum of the nation and the age. First of all, it was a political necessity, one that would prevent the threatened secession from the union of the Pacific states. The discovery of gold had already attracted there a large and rapidly increasing population, drawn partly from the south, and separated from the Atlantic slope by desert plains and almost impassable mountains. Already disaffected, they were becoming more and more inclined to separate from a country with whose interest they had so little in common, and to establish for themselves a western republic subject to their own peculiar laws. Second, it was a military necessity, and would enable the government to resist invasion and put an end to Indian wars by the rapid concentration of troops and supplies. Third, it would provide quicker and cheaper means of transportation for mails. Fourth, it would lead to the settlement of the vast and thinly peopled region

west of the Rocky mountains, a region whose area was nearly one third of the entire domain of the United States.

For these and other reasons, in July 1862, an act was passed by congress "to aid in the construction of a railroad and telegraph line from the Missouri river to the Pacific ocean, and to secure to the government the use of the same for postal, military, and other purposes." As to the terms and conditions under which the Union Pacific was chartered, the following were the salient features: The company was authorized to build westward from the Missouri river to the California line. The capital stock was placed at $100,000,000, in shares of $1,000 each, no stock to be sold below par, and not more than 200 shares to be held by any one individual. The right of way was granted through public lands, with the privilege of taking therefrom all material required for construction. Five alternate sections of land per mile were granted to the company on either side of the road, with a subsidy in bonds of $48,000 per mile for 150 miles from the eastern base of the Rocky mountains, thence westward to the Sierra of $32,000, and for the remainder of the route of $16,000 per mile. The bonds were to be issued as earned, when each section of 40 miles had been completed and approved; they were to constitute a first mortgage on the road and its equipments, and 25 per cent of the total amount was to be retained until the entire line should be completed. Five per cent of the net earnings, together with the entire amount due for government transportation, must be applied to the payment of principal and interest, and should the road remain unfinished on the 1st of July, 1876, the entire property was to pass into the hands of the government.

Even under these hard conditions, the promoters did not hesitate to accept the grant, though well aware that without further congressional aid, to build the Union Pacific was a task utterly beyond their

resources. First of all, to secure control of the road would require an investment of more than $50,000,000. Then there was the depreciation in government bonds and currency, becoming more serious with every reverse that attended the great international contest, the result of which was as yet by no means assured. But the most serious difficulty was the clause whereby the subsidy was made a first lien on the road, since no second mortgage would be accepted by capitalists, and yet without their aid they could not hope to receive even the first issue of government bonds.

Subscription-books were opened, but with the most discouraging results, for in such a project the public did not care to risk their means, and in financial circles it was regarded as extremely hazardous, if not altogether impracticable. At the end of a year the amount subscribed was barely sufficient to permit the election of a board of directors, and thus preserve the life of the corporation. At the end of two years little more than $2,000,000 of the stock had been taken, and of this only ten per cent had been paid in cash, or some $200,000 in all, wherewith to build the Union Pacific railroad, the ultimate cost of which exceeded $70,000,000.

At this juncture a supplementary act was passed by congress, on the 2d of July, 1864, increasing the company's land subsidy, and withdrawing the more objectionable features in its charter. The directors were empowered to issue first-mortgage bonds, to which the government lien was made subordinate, the subsidy bonds to be issued for each twenty-mile section, and two thirds of them after the grading had been finished. The time appointed for the completion of the road was extended, and only one half of the earnings for government transportation was to be withheld.

But while thus strengthening the position of the Union Pacific, there were two provisions in the amended act which wrought most serious injuries to the company. One was, that the Kansas Pacific, re-

quired in the original act to connect with the former at some point not farther west than the 100th meridian, or about 250 miles west of the Missouri, should be authorized to make such connection at any point deemed suitable. The result would be a parallel road for a distance of more than 500 miles west of the river, or about half the entire length of the line, with equal advantages and facilities for traffic. By another clause it was provided that, in case the Central Pacific should be the first to reach the boundary line of California, it should have the privilege of extending its road 150 miles farther to the eastward, and by a subsequent act of congress it was empowered to extend it indefinitely, until the two lines should meet. Hence the race in construction, when culminated in the building of 500 miles by each company in a single season, and that, as Mr Oakes Ames remarked, "through a desert country, on a route beset by unparalleled obstacles, and at a necessary cost largely in excess of the most extravagant estimates."

In May of this year the Union Pacific had appointed a committee to receive proposals and let out the work of building the road, and three months later a contract had been made with one H. M. Hoxie for the construction of 100 miles of roadway westward from Omaha, payment to be received in the company's securities. On the 4th of October, 1864, Hoxie made the following proposition: "On condition that your railroad company will extend my contract from its present length of 100 miles, so as to embrace all that portion of the road between Omaha and the 100th meridian of longitude, I will subscribe, or cause to be subscribed, for $500,000 of the stock of the company." But who was Hoxie, this man of unlimited means, who handled railroad contracts as though he wielded the resources of a Rothschild or a Vanderbilt? If we can believe the testimony of Oliver, the brother of Oakes Ames, given some years later before a congressional committee, he was simply an employé of the

road in charge of the ferry over the Missouri river. He was in no sense of the word a man of financial responsibility, and it was not even expected that he would carry out his contract. In a word, he was merely a figure-head, one to whom the contract was let with a view to transferring it to some one else, and that some one else was the credit mobilier. The same remark applies to contracts made with other parties, of which further mention need not here be made. Certain it is that none of them entirely fulfilled their engagements, and soon the directors of the Union Pacific found that they could not rely on individual contractors to do their work. But before proceeding further a few words should be said as to the origin of the credit mobilier and its connection with the Union Pacific.

The credit mobilier of America was originally a Pennsylvania company, organized in 1859 under the laws of that state, and known as the Pennsylvania fiscal agency. It was authorized to traffic in real and personal estate, and in railroad bonds and other securities, to advance money to railroad and other companies, to contractors and manufacturers, and to purchase, hold, and dispose of property of all descriptions, including the notes, bonds, and other obligations of individuals, corporations, or states. But for years the agency languished, almost in a moribund condition, and using but few of its powers and privileges, until in 1864 its charter was purchased by the Union Pacific, to be used in the interests of the company. In March of that year its name was changed by act of the Pennsylvania legislature, and soon afterward an agency was established in the city of New York, to which were intrusted all the powers of the board of directors. Here also a railroad bureau was organized, to the members of which was given the entire control of the company's contracts, subject to the approval of its president. Thus the credit mobilier was removed entirely from the state of Pennsylvania, and

maintaining there only its corporate existence, took upon itself the task of building the Union Pacific.

The stock of the railroad company already issued, amounting to $2,180,000, was purchased by the credit mobilier, and the ten per cent deposit refunded to the stockholders. Then by act of congress the original stock was cancelled, and a reissue made, in shares of $100 each, to the stockholders of the credit mobilier. Thus for all practical purposes the two corporations became identical, the members composing the one to which the contracts were to be assigned being also those in control of the company for which the road was to be constructed. In a word, the credit mobilier was to the Union Pacific what the Contract and Finance company was to the Central Pacific. Such was the origin of this much-abused institution, one whose workings were but little understood by those who a few years later brought down on it a perfect maelstrom of public condemnation.

On the 15th of March, 1865, the unfinished Hoxie contract was transferred to the credit mobilier, though several months before that date it had been agreed that such assignment should be made. But soon the company discovered in its turn that under existing conditions it was entirely unequal to the task. The first-mortgage bonds were simply unsalable, and even government bonds, with their uncertain and depreciated value, were difficult of sale. They were payable, moreover, in currency, at that time worth only sixty-five cents on the dollar. There was no connection with eastern railroads, and materials and supplies must be forwarded for many hundreds of miles by the slow and costly route of the Missouri river, without even insurance against the perils of navigation. For iron, ties, lumber, provisions, and all other things needed, war rates were still demanded, while labor was scarce and only to be had at extravagant prices. Under such circumstances, to build a road over 1,000 miles in length, for the most part

through a desert country, without water or timber, across mountain ranges infested with hostile savages, by whom scores of employés were massacred at their work, was indeed a task that few would care to undertake. Add to this the prevailing opinion in monetary circles, that the road would never be completed, and if completed that it would never return a profit, and there followed as an inevitable result the failure of the credit mobilier to carry forward its work, until supported by men with larger capital and with greater influence in the financial world.

It was at this juncture that Oakes Ames appeared on the scene, happily for the nation and the Union Pacific, but at the expense of his own fortune, and what he valued more, his peace of mind. It was indeed a heavy burden which he now took up, one that finally proved greater than even he could bear, and by the few who really knew him, by the few who appreciated him, it has always been conceded that in assuming this burden he was actuated by no selfish motives, but rather by the motives of a patriot, by the motives of one intent only on serving his country, at whatever sacrifice to his own fortune and well-being. For nearly a year before giving his consent, he was urged by his friends, by members of congress, by President Lincoln himself, to give to the undertaking the support of his capital and his well-known executive ability. When Lincoln remarked to Oakes and Oliver Ames in 1864, "It is necessary for the union that this railroad should be constructed," both subscribed freely for the stock; but as yet there seemed no prospect of the road being completed. Its securities could not be converted into cash, and when the credit mobilier broke down, all hope appeared to be at an end; it remained only, as men said and thought at the time, to abandon the enterprise, as one beyond the resources of its promoters.

Then it will be seen that when Oakes Ames came forward, it was certainly not to make money, for men

of his wealth, then reaching into the millions, are unwilling to take such risks, and he had nothing to gain by taking them. Already past middle life, he was rich beyond the dreams and requirements of ordinary men; he was at the head of a thriving and prosperous business; his social and political standing were of the highest; his past career was without a stain, and his future without a cloud. But all these blessings, his wealth, his strength, his talents, and if need be even life itself, he was willing to devote to the country and the cause he loved so well.

In the autumn of 1865, with the aid of a few associates, he increased the amount of paid-up subscriptions to $2,500,000. But this he found no easy task. Said an intimate friend, a resident of Boston: "I remember perfectly when Mr Ames was offering the credit mobilier stock, with all the government grants and privileges, freely on State street, at 95 cents on the dollar. I knew that one of our oldest and most distinguished bank presidents declined to buy it on the ground of excessive risk in building a railroad through such a country; and that one of our richest private bankers, after a whole morning of explanation from Mr Ames, refused on the same ground to have anything to do with it. I know that Mr Ames, merely to oblige a business friend, gave him, when he took some of the stock, a written agreement to take it back at the holder's option at any time within four months. I heard one of the largest railroad builders and presidents in the country say, at a public dinner given him by his associates, that the Union Pacific was a noble enterprise, and would enrich their descendants, but that it was too big a thing for him to go into. I myself bought of Mr Ames at 95 per cent such an amount as I could afford to lose, and I thought it an even chance whether I did or not."

But to collect money in mere driblets was not the way to carry to completion an enterprise whose cost was to be counted by tens of millions. In August

1867, less than 250 miles, or about one fourth of the entire road, had been constructed. The remaining three fourths included the most difficult and expensive portions of the route, across the Rocky mountains, across the desert, and with intervening ranges almost impossible to surmount. Meanwhile time was passing, and if the work could not go forward, the company's charter would be forfeited, and the property would pass into the hands of the government, or at best would be sold to capitalists for a small percentage of its value. In the interior workings of the credit mobilier there was also much dissension, one party desiring to make all possible profit from the construction of the road, if indeed it could be constructed, and the other looking for its profit to the ultimate value of the road itself. At the head of the latter was Oakes Ames.

For a time matters came to a deadlock, neither side receding from its position. The company's funds were dissipated, and all further contracts were stopped, though without some definite contract, let to a trustworthy and responsible party, everything would run to waste. Finally a compromise was effected, and on the 16th of August, 1867, a contract was assigned for the greater portion of the road to Mr Ames, who, it was admitted, was the only man that could be relied upon with certainty to fulfil it.

Of this contract, probably the largest in the history of the world, amounting as it did to $47,000,000, the following are the principal features: Commencing with the 100th meridian of longitude, Mr Ames was to build 667 miles of road, at terms varying from $42,000 a mile for the first section to $96,000 per mile for the last. If possible, at least 350 miles were to be completed before the 1st of January, 1868, the work to be done in a good and substantial manner, and Mr Ames to furnish all necessary machinery, machine-shops, depots, and rolling-stock, at a cost of not less than $7,500 per mile. The right was conceded to enter on the company's lands and take

therefrom all the materials needed for construction, together with the benefit of all existing contracts, Mr Ames to assume all the liabilities of the Union Pacific for labor and material supplied or to be supplied west of the 100th meridian. The work was to be completed with all despatch, and at the earliest practicable date, this being regarded as of the essence of the contract; but the road and its equipments were to be of first-class quality, and if the chief engineer should not be satisfied both as to speed and workmanship, then the company, through its agent appointed for the purpose, was to take charge of the work and carry it on at the expense of the contractor. Similar conditions were made as to grading, bridging, superstructure, buildings, and materials, all engineering work to be done at the expense of Mr Ames, the tunnels to be of the proper width for a double track, and when necessary arched with brick and stone.

Payments were to be made as the work progressed, on the estimates of the chief engineer, who should deduct on account of each section the proportionate cost of equipments, buildings, and superstructure. But if the government bonds could not be converted into money at their par value, and the company's first-mortgage bonds at ninety cents on the dollar, the contractor was to be charged with the difference between these rates and the amount that was actually realized. If from the sale of these bonds there was not sufficient to pay for the work as stipulated, the contractor must make good the deficiency by subscribing for a corresponding amount of the capital stock, receiving the proceeds of such subscriptions. The amounts set aside for equipments, etc., were to be expended under the company's direction, in such proportion and at such points as they might determine, the company to have the full benefit of such expenditure without profit to the contractor.

The above contract was made with Mr Ames individually, and not, as has often been alleged, on the

understanding that it should be assigned by him for the benefit of the credit mobilier. At the time it was made he gave no promises, and none were required of him, though the directors placed in him the utmost confidence that he would make an assignment for the benefit of all. As he himself remarked: "Of course I must have associates, but no man shall be wronged, no man shall be deprived of his rights. I am an honest man, and will see that every one is protected." When the contract was finally adopted by the executive committee, one of the conditions was that it should receive the assent of all the stockholders in the Union Pacific. But at this time the company's outstanding stock, nearly all of it disposed of to share-holders in the credit mobilier, amounted to nearly $5,000,000, and was constantly increasing. In order to carry out the contract, it was necessary that the absolute control should be given to a few of the principal holders, for large amounts of stock must be placed on the market, and this might be taken by men whose interests clashed with those of the directors, thus causing dissensions and preventing the completion of the road. The responsibility assumed by Mr Ames was such as would admit of no half measures. The slightest error might bring financial ruin not only on himself, but on all who were associated with him, and every obstacle must be removed that might stand in the way of ultimate success.

Under all the circumstances, therefore, it seemed to him best to assign the contract, not to the credit mobilier as a corporation, but to a few trustees for the benefit of such stockholders in the credit mobilier as, being also stockholders in the Union Pacific, should execute their powers of attorney authorizing the trustees to vote on a majority of all the shares in the latter company owned by the stockholders of the former.

In the assignment made by Mr Ames, the parties

of the second part were his brother Oliver Ames, of North Easton; Thomas C. Durant and Sydney Dillon, of New York; Cornelius S. Bushnell, of New Haven; Benjamin E. Bates, of Boston; Henry S. McComb, of Wilmington, Delaware; and John B. Alley, of Lynn, Massachusetts; the party of the third part being the credit mobilier of America.

In the preamble it is stated that to construct a railway and telegraph line across the plains and the Rocky mountains would require a very large outlay of capital, which capital must be raised in such sums and at such times as would permit the execution of the contract. As a corporation duly established by law, the credit mobilier was empowered to advance money in aid of such enterprises, and was willing to loan such sums as were required, provided there was sufficient assurance that they were properly expended, and that the payments on account of the contract were applied to reimburse them for their advances. The directors of the credit mobilier fully believed that such contract, if faithfully executed, would be profitable and advantageous to the parties performing it, and were therefore willing to guarantee its performance for a reasonable commission. Both the credit mobilier and the party making the assignment had the fullest confidence in the integrity and business capacity of the trustees, believing that they would execute the contract and apply its proceeds to the just use and benefit of the parties entitled thereto.

The assignment was made on condition that the trustees should perform the contract on the terms set forth therein; that they should reimburse themselves and the credit mobilier for all moneys advanced and expended by either, allowing to each of the trustees a compensation not exceeding $3,000 a year; that the profits of the contract should be divided twice a year among those for whose benefit the assignment was made, the books to be always open to the inspection of the trustees, who should cause a monthly

statement to be made to the credit mobilier. On these and other terms, which need not here be mentioned, the trustees agreed to accept the contract and faithfully perform its obligations. The credit mobilier was to advance the necessary funds at seven per cent, to guarantee the execution of the contract, and for a commission of two and a half per cent on the money advanced, to insure Mr Ames and the trustees against loss.

Thus it will be seen that the credit mobilier as a corporation had nothing to do with the execution of the contract. By many it has been asserted, and is still believed, that, as a man of large means, Mr Ames accepted it merely for the purpose of transferring it to a board of trustees composed of the directors of the two corporations, and holding the control of both, a board which could use for the exclusive benefit of its members, including of course Mr Ames, the subsidies and privileges granted by the government. But as a fact, nothing could be further from the truth. Mr Ames accepted the contract, because, once having given to the Union Pacific the support of his influence and capital, and that, as I have said, at the urgent request of the president and members of congress, he would not allow the project to fall to the ground. He accepted it from purely unselfish and patriotic motives, because the road was a national necessity, and to falter now would be to abandon perhaps for a generation any further attempt to build a transcontinental thoroughfare. True, under careful management it might be constructed at a profit on the contract price; but at best that profit would be small, and even when completed, years must elapse before the growth of traffic would make its securities valuable.

But it may be asked, why was a construction company needed to carry on the work? To this it may be answered, first of all, that in trying to build the road itself the company had so completely broken

down as to be forced to sell its rolling stock to pay off pressing debts. It was needed also to limit the liability in case of loss, such liability being restricted to the amount of the company's capital, while individuals involved as partners would be responsible to the full extent of their assets. But there was still another and more cogent reason. In the charter of the Union Pacific its capital stock was placed at $100,000,000, and the books must remain open until the entire amount was subscribed. Thus, when the work was approaching completion, capitalists might come forward, and by subscribing largely obtain control of the road, while those who had assumed the risk and burden of the enterprise would be deprived of all voice in the management. By the construction company these and other perils were avoided, and indeed it is probable that under no other conditions could the road have been built at all.

Although under the assignment Mr Ames was released from personal liability, he assumed that liability of his own accord, taking upon himself the brunt of the burden, investing $1,000,000 of his private means, and staking his entire fortune on the venture. So fixed was his purpose and so firm his faith, that he was willing not only to risk on the issue all that he possessed, but to strain his credit to the utmost. While asking no one to assume a risk which he did not accept for himself in greater degree, he prevailed on a number of his friends to join him, capitalists and men of standing, both in and out of congress, guaranteeing to many the full value of their stock, with ten per cent interest on the investment.

In truth, it was a difficult task that he had now undertaken, one such as no other man would have dared to assume, and no other could have carried to a successful issue. First of all, there was, as I have said, an utter lack of public confidence, especially on the part of capitalists, for aside from the government bonds, then selling at a heavy discount, the only se-

curity was the personal obligation of Mr Ames and the seven trustees. And even if completed, it was extremely doubtful whether the road would pay, for its debts would be enormous, and for a time, at least, the interest alone would absorb the entire earnings. The operating expenses would be heavy, and from the local traffic of the line little income would be earned, for it was believed that in most of the country through which it passed nothing but sage-brush would grow, while the mountainous portion was, of course, uninhabitable.

Though several of the trustees were men of large resources, men whose credit in business circles was of the highest, that credit was quickly impaired by the very fact of their engaging in so hazardous an enterprise. As there was no market for their own bonds, and but the slowest market for government bonds, they were compelled to hold their securities, borrowing money at extravagant interest, and pledging their first-mortgage debentures, often in the ratio of three to one on the amount advanced. Only with the most thorough watchfulness and care, with effort unsparing and unremitted, with a combination of the rarest energy and executive ability, were the final results achieved.

Then there were physical obstacles to be overcome, no less severe than were the financial difficulties. The road must be built through several hundred miles of desert country, crossing the mountain ranges at the highest elevation ever attempted on the continent, and extending through a country swarming with hostile savages, where at times one half the working force was required to protect the other half from massacre. The route lay through a region where, for the thousands of men and animals employed in the work of construction, even water must be hauled for more than a hundred miles, and material and supplies often for ten times that distance. To father such an enterprise, Mr Ames himself remarked, "might well, in the light of subsequent history and the mutations of opinion, be regarded

as the freak of a madman, if it did not challenge the recognition of a higher motive, namely, the desire to connect my name conspicuously with the greatest public work of the present century."

Nevertheless, the road was completed and in running order more than seven years before the time appointed in the original charter of the Union Pacific. Almost from the first it paid its running expenses, with the interest on all its indebtedness, and erelong was paying eight per cent dividends on its stock, besides providing by its sinking fund for the extinction of the government loan. Thus at length success was won, a success in which few believed, and which many openly declared impossible. And to none is that success so largely due as to Mr Ames, who, throwing into the enterprise not only his entire fortune, but the entire resources and energies of his nature, will ever be remembered in connection with one of the greatest financial and engineering feats that the world has witnessed. While Mr Ames and his associates were overcoming the almost insurmountable obstacles that beset their path, men looked on in wonder, and only when the great work was completed gave to them the credit which was long before their due as among the greatest railroad builders of the age.

The immense advantages of the overland railroad, not only to the United States but to the world at large, it is almost impossible to estimate. First of all, we have a saving in the mail service alone amounting to the close of 1885 to nearly $40,000,000. In the carriage not only of mails, but of troops, supplies, and materials of war, ten times the facilities before existing have been placed at the disposal of the government, at one fifth of the former cost, and less than one fifth of the time. But these considerations are of little importance when compared with the benefits conferred on commerce, on the travelling public, and on the political status of the nation. The entire Pacific slope has been absorbed into the federal system,

and the control of the Pacific ocean made secure. A ceaseless tide of immigration has brought the government lands into market, has brought cities and states into existence, has developed mining, agriculture, and other industries, to pour broadcast over the land their fertilizing streams of wealth. The completion of the Union and Central Pacific has proved to the world that the western portion of our continent abounds in resources. It has led to the construction of other transcontinental thoroughfares. It has shown how the national domain can be utilized, and has rendered possible the development of a region exceeding in area all the states east of the Mississippi river. Its value to the nation cannot be computed by millions, nor by hundreds of millions, and there are few who at this day will differ with the sentiment uttered by a well known statesman in 1862: "If I could get the road by voting fifty millions or one hundred millions to it as a gift, I would do it most cheerfully, and consider that I was doing a great thing for my country."

Said Mr Ames himself, in a paper read before the house of representatives in February 1873: "To attempt to grasp the national benefits which lie outside the domain of figures, but are embodied in the increased prosperity, wealth, population, and power of the nation, overtasks the most vivid imagination. When the rails were joined on Promontory summit, May 10, 1869, the Pacific and the Atlantic, Europe and Asia, the east and the west, pledged themselves to that perpetual amity out of which should spring an interchange of the most precious and costly commodities known to traffic, thus assuring a commerce whose tide should ebb to and fro across the continent by this route for ages to come. Utah was then an isolated community, with no industry but agriculture, and those manufactures necessary to a poor, frugal people. In 1872 it shipped ten millions of silver to the money centres of the world, and is now demonstrated to be the richest mineral storehouse on the

continent. An institution repugnant to the moral sense of the Christian world is fast yielding to the civilizing contact of the outer travel made possible by the construction of the railway. Many believe that it has already substantially solved the perplexing problem of polygamy. A vast foreign emigration, bringing with it from Europe an immense aggregate sum of money, has already been distributed far out on the line of the road, and its means and muscle are fast subjecting the lately sparsely peopled territories of Colorado, Wyoming, Montana, and Idaho to the uses of an enterprising and rapidly increasing population. A steady and copious flow of British capital is pouring into the mines of Colorado and Utah. The Indians have been pacified; fruitless and costly hostile military expeditions, frequent elsewhere, have ceased in the vicinity of its line; and the facility and speed of communication afforded by the railroad enable the government to offer adequate protection to the frontier with a handful of troops, and at the same time dispense with large garrisons and fortified posts hitherto maintained at fabulous cost. The countless herds of Texas are moving up to occupy the grazing grounds of the buffalo, in the valleys and cañons shadowed by the Rocky mountains. A region of boundless natural resources, lately unknown, unexplored, and uninhabited, dominated by savages, has been reclaimed, hundreds of millions added to the wealth of the nation, and the bonds of fraternal and commercial union between the east and the west strengthened beyond the power of civil discord to sever."

In completing the Union Pacific, the trustees had done their work, and had done it well, and if ever men were entitled to a nation's gratitude, were entitled to the gratitude of a congress which represents that nation, those men were Mr Ames and his associates. How the former was requited for risking his fortune, for the loss of his health, for placing at the disposal of the government his time, his talents, and his energies,

for accomplishing a task that has few parallels in the annals of the human race, for helping give to the world an empire greater than all the conquests of a Cæsar, the sequel will presently explain.

No sooner was the success of the Union Pacific assured, and with success prosperity, than from every quarter gathered birds of evil omen in quest of prey. Some time in 1867, a government inspector, whose duty it was to examine and report on certain completed sections of the road, refused to do so until the company paid over to him a bribe, or as he termed it, a fee of twenty-five thousand dollars. Thus the issue of the subsidy bonds was delayed, and the work retarded. If a government inspector could demand such a 'fee' for the mere performance of his official duty, what was to be expected of others, whose claims had at least some show of justice? In truth, the company and its contract were regarded somewhat as a prize from which those might grow rich who could; and worst of all were the lobbyists, always ready to demand blackmail with threats of organized hostility.

In the spring of 1869, when the construction company was about to hand over the finished road to the Union Pacific, a concerted effort was made to acquire control of the latter through the orders of the New York courts, the conspirators even attempting to gain forcible possession of the property. Under cover of legal proceedings, their offices were forcibly entered, their safes were opened and plundered of valuable securities, and thus at a most critical period in its history, when, as was hoped, all difficulties overcome, the line was about to be opened for traffic, the Union Pacific was brought once more to the verge of ruin. Compelled to apply to congress for relief, the company asked only for permission to remove its offices to Boston. The request was granted; but soon another difficulty occurred. In the face of the provisions of the amended act of 1864, the secretary of the treasury claimed the right to retain the entire amount due for the carriage

of mails and other services rendered to the government. This he did on the ground that such funds were required to meet the accrued and accumulating interest on the subsidy bonds. In an opinion still famous for its misinterpretations and faulty syllogisms, the attorney-general indorsed the secretary's decision, and only by congressional act of 1871 was that decision set aside.

Meanwhile, the road must be kept in operation, and to meet expenses and interest until a sufficient revenue should be earned, the directors, already $6,000,000 in debt, must make further draughts on their resources. At such a time the withholding of the entire government earnings, instead of one half, as provided in the act, not only added to their difficulties, but caused a serious depreciation in the value of their securities. To Mr Ames especially, who bore the brunt of the burden, the result was most disastrous, causing a serious embarrassment in his finances, and compelling him for the first and only time in his life to appeal to the indulgence of his creditors. I need not say that his request was granted, promptly and unanimously, and that from this temporary strait he was speedily relieved, meeting all his obligations as they matured.

The stockholders of the credit mobilier were divided, as we have seen, into two factions, one of which desired to take every dollar of profit that could be wrung from the construction of the road, and the other to make its profit legitimately from the operations of the road itself. Among the former were many of the original share-holders, who, receiving no profits on their investment, had sullenly held back until, as it seemed, the entire project would end in a disastrous failure. Thus, when in February 1867 the capital stock of the credit mobilier was increased by fifty per cent, and the new stock apportioned among the share-holders, with an equal quantity of Union Pacific bonds added as a bonus, many of the

share-holders refused their pro rata even on these terms, absolutely refusing on any terms to risk another dollar in the venture. But no sooner did Mr Ames take hold of the matter, throwing into it his whole heart and strength, and infusing new life into what had been deemed a moribund enterprise, than these men, forgetting their former reluctance, came forward to demand their share, and for the profits which were now in prospect, and which belonged of right to others, there were no more eager claimants.

Until after the date of the Ames contract, and of its assignment to the seven trustees, the construction stock had been sold with extreme difficulty, and at a heavy discount, much of it remaining in the hands of Mr Ames and his associates. It was, of course, their object to sell it, if possible, to capitalists, even at a sacrifice, with a view to secure their coöperation; but this was seldom possible. As a member of congress and a successful business man of unblemished repute, Mr Ames was frequently consulted by his fellow-members with regard to their investments. Acting in perfect good faith, for he had full confidence in its ultimate value, he recommended the stock of the credit mobilier, and in this stock, placed in his hands for sale as agent of the company, certain of the senators and representatives invested or promised to invest a portion of their surplus funds. Some of them were capitalists, and for a few who were not, but were among his personal friends, he agreed to carry or hold for their account, without payment, a small number of shares, giving them all the benefits of any rise in their market value, and taking on himself the risk of a loss. But in all such instances the transaction was regarded as a sale, the amount at which the stock was valued, at the time it was so held or carried, to be returned to Mr Ames, with interest, whenever the shares were disposed of. Surely such transactions were perfectly legitimate, and neither Mr Ames himself, nor those who bought or agreed to buy the stock,

nor any one else whether in or out of congress, had a word to say against them. It was a stock in which every one had a right to invest, and if it was liable to fluctuations, so were United States bonds; so was bank stock; so was merchandise; and so for that matter was even gold itself.

A few months later, when work on the Union Pacific was commenced in earnest, when the crisis was passed, when through the personal efforts and support of Mr Ames the completion of the road had become a certainty, the shares of the credit mobilier appreciated largely in value, for handsome dividends were already assured. And now Mr Ames was besieged with applicants for the stock that remained in his hands, but in every instance he refused to sell; it was already promised, and he would not break his faith. Certainly he had not in the first instance favored the congressmen, for at the very time when he agreed to sell them the stock at par and interest he had offered it in vain to Boston capitalists, whose aid he wished to secure, at ninety-five cents on the dollar. But now that its value was enhanced, the former should have the benefit, and on returning to Washington for the ensuing session of congress, he made arrangements to have it transferred to the several parties.

At a meeting of the principal stockholders in the credit mobilier, during the winter of 1867–8, Mr Ames asked for the transfer into his own name of 650 shares still remaining in the hands of the company, in order that he might fulfil the obligations which, as the company's agent, he had made with certain of his friends. But at this meeting a similar request was made by the president, T. C. Durant, who also stated that he had promised the stock to his friends. Still a third claimant was one H. S. McComb, who claimed 250 shares of the original stock, for which he had agreed to subscribe in March 1866, together with the increase of fifty per cent, or 375 shares in all. But to this claim the other stockhold-

ers objected, and after much discussion it was finally arranged that the surplus be divided between Mr Durant and Mr Ames, giving to the former 370 shares and to the latter 280. Thereupon an agreement to that effect was drawn up and signed by the shareholders present and by H. S. McComb. By the latter it was afterward asserted that he never read this document; but it has since been clearly proved tha the was perfectly aware of its contents, and that at first he refused his signature on the ground that it did not recognize his claim.

Thus, with the full consent of the leading stockholders, Mr Ames secured at least a portion of the shares that he had promised to his friends, paid their par value, and over them the company had no further control. Still McComb claimed the 375 shares, stating that they had been given to Mr Ames for distribution to members of congress, with a view to influence legislation; that they had been presented to them as a gift or sold far below their value, and in either case were in the nature of a bribe. Even the list received from Mr Ames of the congressmen to whom the stock had been transferred was falsified. As to these accusations, let the reader judge for himself. First of all, the list contained the names of men who had never been in any way connected with the credit mobilier, and of others whose reputation was beyond reproach, such men as James G. Blaine, as Schuyler Colfax, and George S. Boutwell. Then, as to the stock which McComb claimed for himself, the facts are these: On subscribing for his shares, he gave to the treasurer of the company a draft for $25,000, which draft was protested. Thereupon he asked that the subscription be kept open for a time, until he could raise the amount required, and to this the company assented. After several weeks McComb requested the entire transaction be cancelled, and to this it also agreed. For a year and a half nothing more was heard of the matter, and only when the

stock became valuable was the McComb demand renewed. Entering the office one day, when Mr Ames was conversing with Thomas C. Durant, John B. Alley, and another of the directors, he renewed his demand; but was told that all obligations between himself and the company had long since been annulled. In answer he threatened to bring suit, and this he did toward the close of 1868, in the courts of Pennsylvania, after signing the agreement whereby the stock was divided between Ames and Durant.

Meanwhile, some correspondence had passed between Ames and McComb, whose relations were as yet of a friendly character, the former explaining that he had made such disposition of the stock as would improve the status and influence of the company. The letters were written hastily and confidentially, and framed for a purpose entirely different from that to which they were afterward applied. Least of all was it supposed that there could be ascribed to them the imputation of corrupting members of congress. The small amounts of stock disposed of to the several members with whom he had dealings, the fact that its purchase was never urged, and the open manner in which the transactions were concluded, were of themselves a sufficient refutation of the charges preferred. Moreover, a long and busy career, passed in pursuits alike honorable to himself and beneficial to mankind, a reputation free from all stain, one unsullied by any breath of just reproach, these should alone have carried sufficient weight to outbalance the mere unguarded statements of confidential communications.

Slowly the lawsuit dragged its length along, until in 1872, losing all hope of a favorable issue, the plaintiff resorted to more desperate measures. Through his counsel he stated that his letters contained evidence of bribery, that if made public they would ruin many a prominent man, among others some of his nearest friends, and would bring disgrace on himself and all connected with the matter. He would keep

the affair a secret for $100,000. To this Mr Ames replied that he had never entertained any thought of bribery, that he had never attempted to influence any member of congress by gifts or anything else of pecuniary value, that he had never written any such letters as those which McComb claimed to hold, and that those which he had actually written did not contain any expressions that would bear the interpretation placed on them. Whatever he had done or written, he was perfectly willing that the world should know. Finally the letters, one of them containing the names of congressmen, were produced in court, and thus were placed before the public in the columns of the press.

And now came a political Waterloo. In the autumn of 1872 a strong reaction had set in against various real and imaginary abuses on the part of the government, and especially against its wasteful expenditure. Exaggerated reports were published as to the profits of the credit mobilier, and among other things the records of the Pennsylvania court, giving the names of several politicians who, it was alleged, had received the benefit of these profits. The result was a profound sensation, which was further intensified by the divulgence of grave official scandals. A hue-and-cry was raised against what the newspapers termed 'the credit mobilier frauds,' and presently a reign of terror ensued. Some of the congressmen who had purchased the stock, becoming alarmed, returned it, receiving back their money with interest; some who had agreed to take it declined to do so, and others declared that they had never invested a dollar in the enterprise or received a dollar of its profits, either directly or indirectly. A general election was at hand, and a panic arose among men in power whose reputation was involved. Those whose names were not on the list were only too willing to cast reproach on the names of their rivals, and many implicated in other transactions that would not bear

the light of day were in constant dread of exposure. The air was filled with evil rumors, and those whose character was before above suspicion suffered in common with the rest from the imputation of political jobbery.

It was impossible to ignore the onslaught made by the press throughout the country on members of congress, and at the opening of the session, in December 1872, James G. Blaine, speaker of the house, asked that a committee be appointed to investigate the charges preferred. Thereupon the following resolution was passed without a dissenting vote:

"Whereas, accusations have been made in the public press, founded on the alleged letters of Oakes Ames, a representative from Massachusetts, and upon the alleged affidavit of Henry S. McComb, a citizen of Wilmington, in the state of Delaware, to the effect that members of this house were bribed by Oakes Ames to perform certain legislative acts for the benefit of the Union Pacific railway company, by presents of stock in the credit mobilier of America, or by presents of a valuable character derived therefrom; therefore,

"Resolved, that a special committee of five members be appointed by the speaker pro tempore, whose duty it shall be to investigate and ascertain whether any member of this house was bribed by Oakes Ames, or any other person or corporation, in any matter touching his legislative duty."

As soon as the preliminaries could be arranged, the committee entered on its duties, and for some two months remained in session, examining all who could give information on the charges to be investigated. The members were Luke L. Poland, of Vermont; Nathaniel P. Banks, of Massachusetts; James P. Beck, of Kentucky; William E. Niblack, of Indiana; and George W. McCrary, of Iowa. From the name of the chairman it was termed the Poland committee.

At first the investigation was conducted in secret,

as was the custom in such cases; but soon the popular clamor, together with the garbled reports that appeared in the press, compelled the committee to throw open their doors. The proceedings, it was declared, must be held in the face of day; nothing must be hidden from the people's gaze, nor aught extenuated. It was enough that they had been robbed in the construction of the railroad, and that members of congress had been bribed. Surely there is no more ludicrous spectacle than the public in one of its fits or freaks of virtuous indignation. For years they will tolerate the most flagrant abuses without complaint, and then on some trifling provocation, or without provocation at all, break forth into a paroxysm of ire and resentment. Then woe unto those who chance to be their victims, since victims they will surely have, selecting them often among the most upright and honorable of men, for detraction, like death, loves a shining mark.

Now that the voice of slander is hushed, and the dust of political controversy has cleared away, the proceedings appear as though directed against one whom all had determined to offer as a sacrifice. And that one was Mr Ames. To appease the popular clamor, the leaders of the reigning party knew not which way to turn, and when the doors of the committee-room were opened they saw at once that it was useless to conceal or palliate the offences charged, if offences there were. Vindication was less easy than the offer of a victim; and as Oakes Ames was the one for whom both press and public hungered, on him the blow must fall, the sacrificial knife descend. In vain he gave his evidence in the most truthful and straightforward manner, without concealment or prevarication, and as a man incapable of falsehood in any form. In vain he verified from his memorandum-book the simple, business-like agreements made with congressmen some years before, to purchase construction stock. In this time of panic, when everything

depended upon his testimony, he was denounced by friend and foe alike, all of whom sought to excuse themselves at whatever cost to the man whom their own false statements defamed.

The main cause of trouble came from the denial by certain members of congress, on the eve of a general election, that they had ever taken, or agreed to take, or had anything to do with the credit mobilier stock. By these men it was supposed that, when the investigation came, Mr Ames would help them out of the difficulty by confirming their denial, and thus would clear them from all blame. But they had reckoned without their host, not supposing that the inconvenient factor of truth would enter into the question. There was in fact only one honorable means of escape from the dilemma, and that was to acknowledge, as some few did, that they had purchased the stock, as they had a right to do, and for so doing were never placed under the ban of condemnation. It was not the purchase that wrought the mischief, but the denial or prevarication, causing the credit mobilier to be stamped as some mysterious power for evil, as a vehicle for political corruption, and that by men who had not the least conception what it really was, what were its purposes, or what it had accomplished.

The entire proceedings were indeed without a precedent in the history of the national legislature, relating as they did to the conduct of men who, even if proved guilty, could not be punished by action on the part of congress, or by any proceedings in law. The offence, if any existed, had been committed years before, and could not come within the cognizance of a legislative body which then had no existence. In truth, the investigation was merely the result of a political panic, of the predetermined purpose of the party then in power to shield itself from public censure by making a vicarious sacrifice. To satisfy the popular indignation something must be done, and nothing was so easy as to throw the blame on Oakes

Ames and the credit mobilier. By Mr Ames it was frankly admitted that he had sold or promised the stock to members of congress, but for a stated price, and for what was then its market value. On this point the issue mainly turned, for if he had not disposed of it for less than its actual value, it could not have been used to secure legislative action in his favor.

The first witness examined by the committee was McComb, who stated that, in conversation with Mr Ames, the latter had admitted having used the stock of the credit mobilier, with a view to influence members of congress in favor of the Union Pacific, that he had told him such was his intention in asking for the 650 shares then in the company's hands. He also produced, with many unfavorable comments, the letters already mentioned, stating that Mr Ames had written them in confidence, that he had several times admitted that the stock had been placed in his hands for the purpose of influencing legislation, and that he had offered it at par at a time when it was worth far more than that price.

In support of these charges there was no other evidence than that of McComb, whose hostility was caused merely by his failure to obtain for himself the shares allotted to Mr Ames. After giving in payment of his subscription a protested draft, he had cancelled that subscription by consent of the committee, a year or two afterward, when the stock became valuable, renewing his forfeited claim. He had then attempted to coerce the man whom he now accused, had on his own statement betrayed the confidence reposed in him, and now most grossly misinterpreted the confidential letters addressed to him on the company's affairs. His testimony stood entirely alone, for in support of his accusations no other evidence was offered, and against them was that of Mr Ames, who flatly contradicted him at every point.

It was positively denied by Mr Ames that he had

held such conversation with McComb as the latter asserted, that he had ever made such admissions, and that it had never entered into his mind to use the stock for the purpose of influencing legislation. He had sold it or promised it to members of congress when it was not above par, and when it was difficult to dispose of to the public, though believing it to be a good investment, and one that would sooner or later return a considerable profit. As to corrupting legislation, the charge was simply absurd; for no further legislation, even of a favorable character, was needed by the Union Pacific, and adverse measures there was no reason to apprehend. The letters written to McComb were simply in response to his own, and in answer to his inquiries. They were written mainly with a view to discourage further attempts to gain possession of the stock, and to show that he himself was working, not for his own personal benefit, but for the common benefit of all concerned in the enterprise. They were written for a specific purpose, and under the pressure of business, in familiar and unguarded language, without the least expectation that they would ever be published to the world.

The remaining testimony referred mainly to the sale or disposal of the stock, and by all the witnesses it was agreed that this had occurred soon after the meeting of congress for the session of 1867–8. It was shown by the records that no measures touching the Pacific railroads were then before the national legislature, and that none were introduced for nearly two years after their completion. But from the mass of evidence laid before the committee a few brief extracts will suffice. And first of all I will give that of Schuyler Colfax, James G. Blaine, and George S. Boutwell, all of whose names were on the list furnished by McComb as receiving stock as a gift, or at prices far below the value, and in the nature of a bribe.

"I state explicitly," said Mr Colfax, then vice-

president of the United States, "that no one ever gave or offered to give me any shares of stock in the credit mobilier or Union Pacific railway. I have never received, or had tendered to me, any dividends in cash, stock, or bonds, accruing upon any stock in either of said organizations. And neither Mr Ames, nor any other person connected with either of said organizations, ever asked me to vote for or against any measures affecting the interests of either, directly or remotely, or to use any personal or official influence in their favor." He then explained that some five years before, when conversing with Mr Ames on the floor of the house, of which both were members, the latter had spoken so favorably of the prospects of the credit mobilier that he expressed a wish to purchase 20 or 30 shares as soon as he could spare the money. It was agreed that he should take 20 shares at par and interest, and on these he soon afterward paid a deposit of $500. A few weeks later, hearing that disputes between the leading stockholders would probably lead to prolonged litigation, he asked to withdraw his subscription, which was cancelled by mutual consent.

James G. Blaine testified that he was recommended to subscribe for ten shares, merely as an investment, but after consideration decided not to take them, never did take them, never paid or received anything on account of them, and never had any interest, direct or indirect, in credit mobilier stock, or stock of the Union Pacific. To the same effect spoke George S. Boutwell, who was said to have been a holder of the stock, but declared that he had never been in any way connected with the credit mobilier.

Said another witness: "I had no idea of wrong in the matter. Nor do I now see how it concerns the public. No one connected with either the credit mobilier or the Union Pacific railroad ever directly or indirectly expressed, or in any way hinted, that my services as a member of congress were expected in

behalf of either corporation in consideration of the stock I obtained, and certainly no such services were ever rendered. I was much less embarrassed, as a member of congress, by the ownership of credit mobilier stock than I should have been had I owned stock in a national bank, or in an iron furnace, or in a woollen-mill, or even been a holder of government bonds; for there was important legislation while I was in congress affecting all these interests, but no legislation whatever concerning the credit mobilier. I can therefore find nothing in that regard to regret."

As to the testimony of James A. Garfield, which, together with that of Mr Colfax differed materially from the statements of Mr Ames, the committee found that Mr Garfield "agreed with Mr Ames to take ten shares of credit mobilier stock, but did not pay for the same. Mr Ames received an 80 per cent dividend in bonds, and sold them for 97 per cent, and also received a 60 per cent cash dividend, which together paid the price of the stock and interest, and left a balance of $329. This sum was paid over to Mr Garfield by a check on the sergeant-at-arms, and Mr Garfield then understood this sum was the balance of dividends after paying for the stock."

As to the discrepancies between the evidence of the accused and that of the witnesses, it is unnecessary here to enter into details, since, in order to put the case fairly and without favor to Mr Ames, I have given either their own version or the finding of the committee. But in the case of Garfield and Colfax there was a serious conflict of testimony, and one that leaves no doubt that the statement of Mr Ames is the one to be believed. The following are the concluding lines of the documentary evidence of Mr Garfield, too lengthy to be quoted here in full. "Nothing was ever said to me by Mr Ames to indicate or imply that the credit mobilier was, or could be, in any way connected with the legislation of congress for the Pacific railroad, or for any other pur-

pose. Mr Ames never gave, nor offered to give, any stock or other valuable thing as a gift. I once asked and obtained from him, and afterwards repaid to him, a loan of $300; that amount is the only valuable thing I ever received from or delivered to him. I never owned, received, or agreed to receive, any stock of the credit mobilier, or of the Union Pacific railroad, or any dividends or profits arising from either of them." He admitted, however, that he had at one time intended to take the stock, but was prevented from doing so by certain considerations, among which was the extent of his personal liability.

In his testimony before the committee Mr Ames made the following statements, which I give in his own straightforward and business-like phrase: "I got for Mr Garfield ten shares of the credit mobilier stock, for which he paid par and interest. The agreement was in December 1867, or January 1868, about the time I had these conversations (as to investing in the stock) with all of them. It was all about the same time. Mr Garfield did not pay me any money. I sold the bonds belonging to his $1,000 of stock at $97, making $776. In June I received a dividend in cash on his stock of $600, which left a balance due him of $329, which I paid him. That is all the transaction between us. I did not deliver him any stock before or since. That is the only transaction, and the only thing."

And now comes a phase in the evidence in which, while omitting all that is irrevelant, it is necessary, for a clear understanding of the matter, to give both questions and answers in full.

When you paid him this $329, did he understand it was the balance of his dividend, after paying for the stock?

I suppose so. I do not know what else he could suppose.

You did not deliver the certificate of stock to him?

No, sir; he said nothing about that.

Why did he not receive his certificate?

I do not know.

Has that $329 ever been paid to you?

I have no recollection of it.

Have you any belief that it ever has?

No, sir.

Did you ever loan General Garfield $300?

Not to my knowledge; except that he calls this a loan.

You do not call it a loan?

I did not at the time. I am willing it should go to suit him.

What we want to get at is the exact truth.

I have told the truth in my statement.

When you paid him $329, did he understand that he borrowed that money from you?

I do not suppose so.

That amount has never been repaid you?

No, sir.

You regarded that as money belonging to him after the stock was paid for?

Yes, sir.

You did not understand it to belong to you as a loan; you never called for it, and have never received it back?

No, sir.

There were dividends of Union Pacific stock on these ten shares?

Yes, sir.

Did General Garfield ever receive these?

No, sir.

Has there ever been anything said between you and him about rescinding the purchase of the ten shares of the credit mobilier stock? Has there anything been said to you of its being thrown up or abandoned or surrendered?

No, sir; not until recently.

How recently?

Since this matter came up.

Since this investigation commenced?

Yes, sir.

Did you consider, at the commencement of this investigation, that you held these other dividends, which you say you did not pay to him, in his behalf? Did you regard yourself as custodian of these dividends for him?

Yes, sir; he paid for his stock, and is entitled to his dividends.

Will the dividends come to him at any time on his demand?

Yes, sir; as soon as this suit is settled.

You may state whether, in conversation with you, Mr Garfield claimed, as he claimed before us, that the only transaction between you was borrowing $300.

No, sir; he did not claim that with me.

State how he does claim it with you; what was said. State all that occurred in conversation between you.

I cannot remember half of it. I have had two or three interviews with Mr Garfield. He wants to put it on the basis of a loan. He states that, when he came back from Europe, being in want of funds, he called on me to loan him a sum of money. He thought he had repaid it. I do not know. I cannot remember.

What did you say to him in reference to that state of the case?

I stated to him that he never asked me to lend him any money; that I never knew he wanted to borrow any. I made a statement to him, showing the transaction and what there was due on it; that, deducting the bond dividend and cash dividend, there was $329 due him, for which I had given him a check.

After you had made that statement, what did he state in reply?

He wanted it to go as a loan.

Did he claim that it was in fact a loan?

No; he did not.

Did you have any conversation in reference to the influence this transaction would have upon the election last fall?

Yes; he said it would be very injurious to him.

State all you know in reference to it.

I told him he knew very well that it was a dividend. In one conversation he admitted it, and said, as near as I can remember, that there was $2,400 due him in stock and bonds. He made a little memorandum of $1,000 and $1,400, and, as I recollect, said there was $1,000 of Union Pacific stock, $1,000 of credit mobilier stock, and $400 of stock or bonds, I do not recollect what.

It may be here explained that the "$400 of stock or bonds" was merely an error, relating probably to the $329 of which payment was made by check.

Have you the memorandum that Mr Garfield made?

I have the figures he made.

At this point a paper was handed to the committee, on which were the figures, $1,000

1,400

2,400

You say those figures were made by Mr Garfield?

Yes, sir.

How did you happen to retain this little stray memorandum?

I found it on my table two or three days afterward. I did not pay any attention to it at the time, until I found there was to be a conflict of testimony, and I thought it might be something worth preserving.

Taken in conjunction with the finding of the committee, the testimony of Mr Ames is sufficient to clear him from all imputation of wrong, and that testimony is further strengthened by the following entry in his memorandum-book, as made at the time of the transaction, and laid before the committee at the chairman's request:

GARFIELD.

10 shares Credit M.	1,000.00
7 mos. 10 days (interest)	43.36
	1,043.36
80 per ct. bd. div. at 97	776.00
	276.36
Int'st to June 20	3.64
	271.00

1,000 C. M.
1,000 U. P.

After being confronted by this evidence, Mr Garfield wisely refrained from any further statements, offering no word of denial or even of explanation. Without wishing to cast any reflection on one whom the nation honored so justly as a statesman and as a man, it is impossible to come to any other conclusion than that he was trying to screen himself at the expense of Mr Ames, and that in the hope that the latter would indorse his testimony, and so place him before the world as one who was never connected with the much-abused credit mobilier. But however painful the task, at all hazards Mr Ames would speak the truth, and nothing but the truth. It is due to his memory that here the truth should also be spoken, at whatever cost to those whose names I would gladly shield from obliquy

Less discreet was Schuyler Colfax, who, through his counsel, tried to break down, by cross-examination, the evidence of Mr Ames, but at every step found himself more deeply involved, and failed to shake it in the slightest degree. Here again was produced the memorandum-book, the same one as presented in the case of Garfield. By the remaining witnesses it was admitted, with here and there an exception, that they had bought the stock; among them was no conflict of testimony, and the same chain of evidence

that connected them with the transactions which they acknowledged applied with equal force to those who denied them.

But, as I have said, to allay the popular clamor a victim must be had, and that victim was Oakes Ames. From the report of the committee, one of the most remarkable documents ever presented to congress or to the world, the following extracts will serve to show the injustice of its members:

"In his negotiations with these members of congress, Mr Ames made no suggestion that he desired to secure their favorable influence in congress in favor of the railroad company, and whenever the question was raised as to whether the ownership of the stock would in any way interfere or embarrass them in their action as members of congress, he assured them it would not. The committee have not been able to find that any of these members of congress have been affected in their official action in consequence of their interest in credit mobilier stock."

After stating thus explicitly that the accused was not guilty of the charges preferred against him—that is, of distributing the stock for the purpose of influencing legislation—the report concludes with the following resolution, one inexplicable on any principles of common sense, and a contradiction, in terms, of the finding already made:

"Whereas, Mr. Oakes Ames, a representative in this house from the state of Massachusetts, has been guilty of selling to members of congress shares of stock in the credit mobilier of America, for prices much below the true value of such stock, with intent thereby to influence the votes and decisions of such members in matters to be brought before congress for action; therefore,

"Resolved, that Mr Ames be and he is hereby expelled from his seat as a member of this house."

And this after it had been clearly proved that at the very time the stock was being sold at par to mem-

bers of congress, it was going a-begging in the money-eyed centres of the east at ninety-five cents on the dollar. It was agreed by all the witnesses that the stock had been taken at the opening of the session of 1867–8, and it was not until long afterward that it began to rise. When it did so Mr Ames either delivered it or held it in trust for the parties to whom it was promised. In most instances it was held in trust, because if the transfer had been recorded on the books of the credit mobilier, the holder would not have been entitled to dividends unless he was also a shareholder in the Union Pacific and had given his proxy to the trustees. But so long as it remained in the name of Mr Ames it would be entitled to any dividends that might be declared. Hence it was that no transfer was made, Mr Ames only making an entry in the memorandum-book displayed to the committee, and when credit was given for the purchase-money, charging interest on the par value of the shares. Men do not charge interest on bribes.

But the resolution of the committee was not only an act of gross injustice; it was unconstitutional; it was an attempt to expel a member of a later congress for offences alleged to have been committed in a former one—a measure before unheard of, and without the least show of precedent. During the debate which followed, the judiciary committee reported adversely on the decision of the investigating committee, and thus it was finally resolved to substitute a resolution of censure for one of expulsion. But the house had no more right to pass the one than the other; for while congress may at any time rid itself of offending members, it can neither expel nor censure a member for what he is alleged to have done before that congress existed.

With this, however, we are not immediately concerned, but rather with the question, Was the charge of bribery sustained? It was not sustained, as we have seen by the evidence of the witnesses, nor by

the facts and circumstances of the case. All that there was to sustain it was the testimony of McComb, contradicted at every point by that of the accused, and it has already been shown that the former was entirely unworthy of credence.

The debate on the substitute resolution was compressed within a much shorter space of time than the gravity of the occasion demanded; for in a few days the session was to end, and with it ended the ten years' term of Mr Ames' congressional career. In that debate some of the most able and impressive speakers took part; but their speeches were more dramatic than judicial, and to the impartial observer it appeared to be the sole object of the members to clear themselves in the eyes of the world, even at the expense of justice and truth. But there was here and there an exception, and among the speeches in defence of Mr Ames were two of the most eloquent that have ever been heard within the walls of the house. In substance, they were as follows: It was not the finding of the committee that members had any other reason for taking their stock than that they considered it a profitable investment, or that such investment affected in the least their official action. It was not even charged that Mr Ames had urged any one to take the stock; it was shown, on the contrary, that several of those who took it themselves made the first advance. In brief, the finding of the committee was, first, that Mr Ames bribed certain of his friends; second, that they were not aware that they were bribed; third, that their official action was in no way affected by the bribe; fourth, that neither he nor the parties bribed knew what those parties were to do or abstain from doing in consideration of such bribes. In bribery, as in conspiracy, there must be two parties, and there can be no bribery unless the person bribed is to do or abstain from doing a certain thing. Moreover, a man does not bribe his friends, who are already willing to side with him, and to favor his interests; he

bribes those who are opposed or indifferent to his interests, in order to prevail upon them to do what he desires, and it was stated in the committee's report that all who invested in credit mobilier stock were not only his friends, but the friends of the railroad company.

Mr Ames was a man whose reputation was beyond reproach wherever he was known; he was a man of great enterprise and of considerable wealth, one who had shouldered a responsibility which no other man in the country would shoulder, who had invested his private fortune in an enterprise for which the aid of capitalists had been sought in vain. For many years he had been a member of congress; and what new thing had he done that was not known before? Had anything transpired as to his transactions during the present session of congress that was not patent years ago? Every one, whether in or out of congress, who knew anything about the Union Pacific, knew also of the credit mobilier, and that Mr Ames was a holder of the stock. What was the fresh iniquity that was causing all this excitement? Why was it more wicked and iniquitous to hold credit mobilier stock to-day than it was five years ago? We all knew that we held it then, and we thought nothing of it; but now, when he was about to bid good by to the hall, when he was about to take his final leave of congress, it was proposed to unseat him in the very last days of his political career. For what? For selling credit mobilier stock which he held years ago, and which we all knew at the time that he owned. We have no right, either constitutional or legal, to expel a member for offences alleged to have been committed five years ago, before his election to the house.

At a time when nearly one half the union was struggling against the other half, when the earth resounded with the tramp of armed men, in the darkest hour of our fortunes, Oakes Ames came forward and subscribed near $1,000,000 to build across the continent a

railroad that should hold the east and west together. He trusted in his country's future, and his act was patriotic; if to do good to his country and mankind was his motive he did well, and no man has the right or the power to say it was not well. If there is a member in this house who will rise in his place and say he does not believe Oakes Ames to be an honest and truthful man, that member is yet to be discovered. Every one believes in his testimony, and the committee itself has certified to its truth. The possession of credit mobilier stock is not to be imputed to him as a crime. Every member of congress knew it; his own constituents knew it, and so far from wishing to conceal it, he was praised by all for his enterprise and public spirit. His advice was sought and followed, not with any thought of wrong, but because men trusted and confided in his judgment. There was no guile in him. He embarked his all in the undertaking, and before he had done with it, it broke him down.

"I have known him long and well," concluded one of the speakers, "I have known him when he was a member of the council of Governor Andrew, and aided him with troops to save the country. He went forward side by side with the illustrious war-governor of Massachusetts in those great measures which filled our armies and carried on our war, trusted, honored, and beloved. I have known him since. I have seen him when ruin stared him in the face, because he had taken part in this great national work. I have seen him crushed down to earth with the obligations and debts not incurred for himself, but in the service of his country; and yet such was the force of his honesty, and such his integrity of character, that each and all of his creditors gave him extension of credit, and every one has been paid to the uttermost farthing. It is to his honor that he had to absent himself from your committee while investigating his honesty, to go home and do the last act of an honest man by paying up the last dollar of his extended debt. Such is Oakes Ames."

While the Poland committee was in session, a second one, known as the Wilson committee, was appointed to inquire into the connection of the credit mobilier with the building of the road, and whether the government had been in any way defrauded. In the report of this committee were the same misstatements and misconception of facts, showing that its members were no less under the influence of political bias than those of the investigating committee. They failed to see, or would not see, that the Ames contract had nothing to do with the credit mobilier, except for the money paid to it by the seven trustees. They did not even understand the relations between the government and the Central and Union Pacific, appearing to think that the former had loaned the railroads money from its treasury, whereas it had merely loaned its credit. They stated the profits of construction at nearly three times their actual amount, recommended that the secretary of the treasury should retain, in violation of the act of 1864, all the sums earned by the Union Pacific for government transportation, and that suits be instituted against all parties who had received from the construction company any portion of the dividends.

The report was adopted, though it has since been shown that, like the finding of the Poland committee, it had its origin in popular clamor and prejudice, and was utterly without foundation, either as to facts or law. The Union Pacific recovered in the courts the moneys unlawfully withheld by the secretary of the treasury, and in suits brought by the attorney-general against the corporation and stockholders of the credit mobilier, judgment was rendered, and on appeal the judgment was confirmed by the supreme court of the United States, that there was no ground on which any claim whatever could be established against the company. Thus, except for the expense to which the defendants were subjected, and the financial difficulties caused by the law's delay, the action of the

Wilson committee, a committee of biased and hot-headed politicians, was set aside by the calmer action of the courts.

In conclusion, let us hear the defence of Mr Ames himself, as read by the clerk of the house before the accusing committee. It was in truth a masterly effort, and by many was pronounced the speech of the season, containing, as it did, a clear and comprehensive view of the entire question, one in which argument and appeal were blended with inimitable skill. After giving a detailed account of the construction of the road and the acts of congress pertaining thereto, he relates the story of the several contracts and their successive failures, explaining how it became necessary to organize a construction company, his connection with that company, his contract, and its assignment. He describes the condition of affairs in 1867, showing that the company had no reason to fear unfriendly legislation, since not only the government, but the entire nation, was in favor of the enterprise, and loud in its demonstrations of approval for the energy with which it was being carried to completion. He showed that no further legislation was had or asked for until more than three years after the sales of stock which formed the basis of the investigation. Then after relating the difficulties of the work he comes to the charge of bribery.

"If this charge be true," he said, "it is predicated upon three facts, all of which should be shown to the satisfaction of this body, in order to justify the extreme measures recommended by the committee.

"First. The shares must have been sold at prices so manifestly and palpably below the true value as to conclusively presume the expectation of some other pecuniary advantage in addition to the price paid.

"Second. The shares must have been of such a nature as that their ownership would create in the holder a corrupt purpose to shape legislation in the interest of the seller.

"Third. Some distinct and specific matter or thing to be brought before congress, and on which the votes and decisions of members are sought to be influenced, should be alleged and proved.

"It is by no means clear, from the testimony, that the stock was sold at a price less than its true value. Unlike an ordinary marketable commodity, it had no current price, and the amount for which it could be sold depended upon the temperament of the buyer, and his inclination to assume extraordinary risks on the one hand, or his tendency to conservative and strictly solid investments on the other. It is in proof before a committee of this house, by witnesses largely interested in railroad construction and operation, and of great financial ability and strength, that when this stock was offered to them at par, it was instantly declined, by reason of the enormous risks involved in the enterprises on which its value depended. These capitalists believed that all the capital invested in the stock was jeopardized, and the venture was declined on the ground that no promise of profit justifies a prudent man in embarking in any enterprise in which all the capital invested is liable to be sunk. Apart from some proof that a small amount of this stock changed hands between persons addicted to speculation, at about one hundred and fifty dollars per share, nothing is shown in reference to its value, except that it was not on the market, and had no ascertained price. To overturn the presumption of innocence, and substitute the conclusive imputation of guilt, from the simple fact of such a transaction occurring between men who had long maintained the most friendly personal relations—of whom nothing was asked, and by whom nothing was promised—is to overturn all the safeguards afforded persons and property by the common law, and in lieu thereof establish an inquisitorial code, under which no man's reputation is safe.

"For the first time in the history of any tribunal, this body has before it an alleged offender without an

offence. Any person accused in the courts of the country, under like circumstances, might well, when called upon to plead to the indictment, insist that it failed to charge a crime. I am charged by the committee with the purpose of corrupting certain members of congress, while it, at the same time, declares said members to have been unconscious of my purpose, and fails to indicate the subject of the corruption. In other words, the purpose to corrupt is inferred where the effect of corrupting could not by any possibility be produced, and where no subject for corruption existed. No lawyer who values his reputation will assert that an indictment for bribery could stand for an instant in a common-law court, without specifically alleging who was the briber, who was bribed, and what precise measure, matter, or thing was the subject of bribery. There can be no attempt to bribe without the hope and purpose of corruptly influencing some person or persons in respect to some particular act. Until, therefore, it is alleged and shown, not only who tendered a bribe, but who accepted or refused it, and what was the specific subject-matter of the bribery, any conviction which may follow the alleged offence must rest upon the shifting and unstable foundation of individual caprice, and not upon the solid rock of justice administered under the restraints of law.

"I shall not enter upon a discussion of the jurisdiction of this body over offences alleged to have been committed during a previous congress, leaving that question for such additional comment as the lawyers of the house choose to make. The position, however, that the fault—if such exists—is a continuing offence, is so extraordinary, and fruitful of such fatal consequences, that I cannot forbear a reference to it. Since the credit mobilier stock sold by me passed into the hands of the several members of congress referred to in the report, I have been, in the judgment of the committee, a perpetual and chronic offender against

the dignity and honor of the house, and so far as my own volition is concerned, must so continue to the end of the world. So long as a single share of this stock shall not be restored, but shall remain in the hands of the several receivers, or either or any of them, my offence goes on, and I am bereft of the power to stop it. And yet, notwithstanding the world is now apprised of my alleged intentions—and no member of congress can be ignorant of them—the parties who alone have the power, but fail to release me from the necessity of continuing my offences by return of the stock, are themselves without blame, and in no way obnoxious to the sins laid upon them. The committee declare that want of knowledge alone of the corrupt intention of the seller excused the buyer, while holding and owning the proceeds of the sale. Now that such knowledge is everywhere, and among all men, how can this, in the absence of a restoration of the stock or its proceeds, be a living, continuing, perpetual crime in the seller, and not in the buyer?

"I beg to be correctly understood. I allege nothing against those members of the house who purchased credit mobilier stock. I am simply following the reasoning of the committee to its logical results. I make no assault upon any man or class of men; but I earnestly protest against being chosen the victim of a line of reasoning and assertion, in my judgment unjust, partial, unsound, inconsistent, and inconclusive —calculated, if indorsed, to bring this body into disrepute, and repugnant to the sense of justice and fair play embedded in the hearts of the American people.

"A vast amount of error has been disseminated and prejudice aroused in the minds of many by incorrect and extravagant statements of the profits accruing from the different contracts for the construction of the road, and especially that commonly known as the Oakes Ames contract. The risk, the state of the country, the natural obstacles, the inflation of the

currency, and consequent exorbitant prices of labor and material, the Indian perils, the unparalleled speed of construction, and the clamorous demands of the country for speedy completion, seem to be forgotton, and the parties connected with the credit mobilier and the construction of the road are now to be tried by a standard foreign to the time and circumstances under which the work was done. It is said that when the failure to secure the necessary amount of cash subscriptions to the stock was proved, and it became manifest that the only medium through which the work could go on was by a constructing company, which would undertake to build the road and take the securities and stock of the company in payment—when the whole enterprise had come to a complete halt, and was set in motion by my individual credit and means, and those of my associates—the enterprise should have been abandoned. Were it possible to present that question to the same public sentiment, the same state of national opinion, which existed at the time the exigency arose, I would willingly and gladly go to congress and the country on that issue. But I am denied that justice, and the motives and transactions of one period are to be judged by the prejudices of another, at an hour when the fluctuations of opinion are extreme and violent, beyond the experience of former times. The actual cost, in money, of building the road was about seventy millions of dollars, and all estimates of a less cost are based upon mere estimates of engineers who never saw the work, and utterly fail to grasp the conditions under which it was prosecuted. The actual profit on this expenditure, estimating the securities and stock at their market value when received in payment, was less than ten millions of dollars, as can be demonstrably established in any court. It is in testimony before a committee of the house, by witnesses who have spent their lives as contractors, as well as those who have been builders, owners, and operators of

some of the great trunk lines of the country, that for twenty years past the ordinary method of building railroads has been through the medium of constructing companies; that few, if any, roads involving a large outlay of capital are built in any other way; that a profit of twenty to thirty per cent is not unreasonable in any place, and that upon the construction of the Union Pacific railroad, estimating it with reference to the magnitude of the work and the risk incurred, no man could reasonably object to a profit of fifty per cent. The like evidence is given by a government director, long intimately acquainted with the manifold difficulties and embarassments encountered, and who has not yet outlived the recollection and realization of them.

"So far as I am pecuniarily concerned, it would have been better that I had never heard of the Union Pacific railroad. At its completion, the company found itself in debt about six millions of dollars, the burden of which fell upon individuals, myself among others. The assumption of the large portion of this liability allotted to me, followed by others necessary to keep the road in operation until there should be developed, in the inhospitable region through which it runs, a business affording revenue sufficient to meet running expenses and interest, finally culminated in events familiar to the public, whereby losses were incurred greatly in excess of all profit derived by me from the construction of the road.

"These, then, are my offences: that I have risked reputation, fortune, everything, in an enterprise of incalculable benefit to the government, from which the capital of the world shrank; that I have sought to strengthen the work thus rashly undertaken by invoking the charitable judgment of the public upon its obstacles and embarrassments; that I have had friends, some of them in official life, with whom I have been willing to share advantageous opportunities of investment; that I have kept to the truth through good and evil

report, denying nothing, concealing nothing, reserving nothing. Who will say that I alone am to be offered up a sacrifice to appease a public clamor or expiate the sins of others? Not until such an offering is made will I believe it possible. But if this body shall so order that it can best be purified by the choice of a single victim, I shall accept its mandate, appealing with unfaltering confidence to the impartial verdict of history for that vindication which it is proposed to deny me here."

At the conclusion of Mr Ames' defence, messages of congratulation were received from the galleries of the house, and from his friends outside the house, with many assurances that his vindication was thorough and complete. All through the long hours of the debate, he had maintained such fortitude and self-control as could spring only from a conscience void of offence. Once only he broke down, and that for a single moment, when one of the members, speaking in his defence, alluded to his early career, to the struggles that had made him strong, to his perfect honesty and integrity, to the entire consistency which gave to his evidence the indelible stamp of truth. Then before the flood of emotion that for an instant overcame him he suddenly gave way, and the strong man buried his face in his hands and wept.

At his post, immediately in front of the speaker, he calmly listened to the final proceedings; but his countenance assumed the palor of death, and his impassive mien but ill concealed the workings of a sore and troubled spirit. It was in truth a bitter trial, such as befalls a man once only in a lifetime, such as only the strongest natures can bear. As he awaited the verdict he thought of the home where he was held in honor and affection by those whom he loved more than life itself, but whom the nation he had served so well was now about to rob of their richest legacy. He thought of his long and stainless career as a business man, of the priceless service he had ren-

dered his country, at the cost of his fortune, his health, his happiness, now to be rewarded by a vote of censure at the hands of a partisan congress. The purity of his motives had never before been called in question, and that it should now be questioned through the selfishness and cowardice of politicians, only added to the intensity of his sufferings. Of all the eloquent appeals that were made in his behalf, there were none more eloquent than the sight of this aged and venerable patriot, awaiting with bowed head, in silence and alone, the decision which should vindicate his name, or offer him as a sacrifice to the clamor of a fickle and unthankful public.

At the close of the general debate, a member from California moved that a resolution of censure be substituted for the one adopted by the investigating committee. The motion was carried by a vote of 115 to 110, and the substitute resolution was adopted. It read as follows:

"Resolved, that the house absolutely condemns the conduct of Oakes Ames, a member from Massachusetts, in seeking to procure congressional attention to the affairs of a corporation in which he was interested, and whose interest directly depended upon the legislation of congress, by inducing members of congress to invest in the stocks of said corporation."

And now followed a scene which is probably without a parallel in the annals of the national legislature. Around Mr Ames crowded with extended hands the very men who had joined in the vote of censure, asking his pardon for having done so, and seeking to palliate an act of gross injustice by urging the political necessity which forced them to it. "We know you are innocent," they said; "but we had to do it, in order to satisfy our constituents." Thus was a man whose name was a synonym for honesty and integrity made the scapegoat of a panic-stricken congress—a congress whose members were in the main self-seeking and even cowardly in their selfishness.

As to the resolution itself, it was on a par with the remainder of the proceedings. It was vague, insinuating, sinister, in some places meaningless, and in others wide of the mark. First of all, the only means of "procuring congressional attention to the affairs of the corporation" would be by introducing some measure before congress as a body, and not by dealing with individual members. Then, as we have seen, the interests of the corporation did not in any way "depend upon the legislation of congress." It was not until several years after the acts of 1862 and 1864 that Mr Ames became connected with the credit mobilier, and when he did so, no further legislation was asked or needed.

One of the most powerful and logical arguments ever written upon the subject of Oakes Ames and the credit mobilier was the address "to the American people, irrespective of party," issued on August 9, 1880, by Oakes A., Oliver, and Frank M. Ames, sons of the political martyr. The occasion was the revival of interest in the credit mobilier, growing out of an alleged complicity therein by James A. Garfield, then the republican candidate for the presidency. The sons of Oakes Ames appealed to the people and press of the United States for a reconsideration of the judgment passed upon their father, not in the interest of any individual or of any party, but in that of truth, equity, and common sense. A statement of the facts in this historical case was due alike, they thought, to a public benefactor whose last days were clouded with obloquy, to the great enterprise with which he was identified, to the good name of both political parties, some of whose trusted leaders had been assailed, and to the honor of the nation, which had been compromised by the opprobrium cast upon its representatives. This memorial fully reviewed the connection of Oakes Ames with the Union Pacific and the credit mobilier, and related the circumstances giving rise to the charges that he

had sold shares of stock in the construction company to members of congress with corrupt intent.

"So far as the charges against Oakes Ames are concerned," says the memorial, "the circumstances under which the sales of stock were made to congressmen by him preclude the possibility of a corrupt intent by either party; for they were made: 1. As a sale, and not as a gift. 2. At the same price (par and accrued interest) which it cost himself and all the original holders. 3. At a time when no legislation was wanted, and with an express assurance that none would be wanted. 4. To known and tried friends of the enterprise. 5. To men whose reputations were worth more than money. 6. In sums so small as to offer no temptation. Any one of these six facts is inconsistent with an intent of bribery, but, taken together, they constitute a perfect refutation. If Oakes Ames bribed any one, what was the bribe? For what was the bribe offered? What act of legislation in behalf of his road did he even seek to attain? If wrong were committed, who were the parties wronged? It is said that the credit mobilier and Oakes Ames contracts were frauds. If so, who were the parties defrauded? Not the government; for it gave only what it agreed to give, and received all for which it stipulated as an equivalent. Not the present stockholders of the Union Pacific railroad; for they own the railroad and the franchise, which is all their stock ever represented. Not the original stockholders of the Union Pacific; for they consented to the contract, and shared in the risk and profit of constructing the road. Not the public; for they enjoy all the great benefits of the great national highway. The committee of congress, which in 1872–3 was charged to investigate, found no member guilty of accepting a bribe. In their report the committee say they 'do not find' that any member was 'aware of any improper object of Mr Ames, or that he had any other purpose in taking this stock than to make

a profitable investment'; that 'in his negotiations with these members of congress, Mr Ames made no suggestion that he desired to secure their favorable influence in congress in favor of the railroad company'; that 'the question was raised, at the time, whether the ownership of this stock would in any way interfere with or embarrass them in this action as members of congress,' and that Mr Ames assured them that it would not, because 'the Union Pacific railroad had received from congress all the grants and legislation it wanted, and should ask for nothing more.' The committee add that when Mr Ames said so, 'he stated what he believed to be true,' and that they have not been able to find that any of these members of congress have been affected in their official action in consequence of their interest in credit mobilier stock.

"Notwithstanding these findings of facts, that nobody had accepted a bribe; that Mr Ames had not offered nor suggested a bribe; that he had charged his colleagues in congress what he had paid himself for the stock; that no one had been wronged; and that there was no criminal—the committee reported that Oakes Ames was guilty of bribery. He was sacrificed to satisfy political prejudices. Have the detractors of Oakes Ames ever asked themselves what motive, except public spirit, could have led a man so situated to contract to build the road? His own personal interest in the construction company in December 1867 was only one eighth of the whole. By signing the contract he made the entire risk his own. But in case of profit, seven eighths of the profit would belong to others. Why, except from public spirit, should a man worth millions, and secure in the possession of them, have risked all by becoming personally responsible, as he did, for the vast sum of $47,000,000? Why else should he have undertaken to find a market for the securities of the road, and to convert them into money, with which to meet these

immense obligations? Why else should he have given the best years of his life to these colossal cares and responsibilities? For the prosperity of his country, he risked his own fortune and that of his family, and up to this hour his return has been, in too many quarters, unmeasured reproach and odium." "To-day," concludes this vindication of the father by the sons, "there live thousands of men in New England, thousands more in the middle states and the great west, who have had business relations with him, who know what we say is true, and will testify of their own knowledge that Oakes Ames was an honest man."

And here we will take our leave of the matter, and willingly so; for never perhaps in the history of the world has been witnessed such legislative unreason, such legislative stultification. This only I will remark, that, but for the testimony of Oakes Ames himself, the real truth would never have been known. For a time indeed, not being under oath, he hesitated to divulge the entire truth, hoping to screen the witnesses from the effects of their own falsehood or prevarication, and screen them he did, so far as was consistent with his duty to his country and to himself. But when he saw that he was being defied, he withheld no longer that which he would willingly have cnncealed, and exposed the entire matter to its innermost details. It was simply because he told the truth, and the whole truth, that he received the censure of congress, the censure of those who belied and slandered him, that while his evidence was believed, it was none the less used against him, even unto his own condemnation.

And now from the scene of his political triumphs and his political wrongs Mr Ames retired, never again to return. By no right-thinking man, whether in or out of congress, was he held in less esteem than before; but rather was lustre added to his reputation for his manly, undaunted attitude under the ordeal of persecution. In all this mournful episode in the nation's

history, there is but one redeeming feature, and that is, the strict devotion to truth that has forever placed the name of Oakes Ames beyond the reach of calumny and slander. If it was he who was censured, it was his detractors who were condemned; if it was he who for the moment was chosen as a victim, it was they to whom the final verdict of mankind has brought home the charge of cowardice and falsehood.

In the following resolution, unanimously adopted in 1883 by both houses of the Massachusetts legislature, was a fair expression of the popular sentiment, after malice and prejudice had lost their influence, and the dust of controversy had cleared away:

"Resolved, in view of the great services of Oakes Ames, representative from the Massachusetts second congressional district for ten years ending March 4, 1873, in achieving the construction of the Union Pacific railroad, the most vital contribution to the integrity and growth of the national union since the war;

"In view of his unflinching truthfulness and honesty, which refused to suppress, in his own or any other interest, any fact, and so made him the victim of an intense and misdirected public excitement, and subjected him to a vote of censure by the forty-second congress at the close of its session;

"And in view of the later deliberate public sentiment, which, upon a review of all the facts, holds him in an esteem irreconcilable with his condemnation, and which, throughout the whole country, recognizes the value and patriotism of his achievement and his innocence of corrupt motive or conduct—

"Therefore, the legislature of Massachusetts hereby expresses its gratitude for his work and its faith in his integrity of purpose and character, and asks for like recognition thereof on the part of the national congress."

On returning to his eastern home, Mr Ames was received with a welcome so hearty and sincere that it

went far to heal the wounds inflicted by a nation's ingratitude. It was intended that the reception should be local, restricted at least to his neighbors and fellow-townsmen; but this could not be permitted, and from his entire district the citizens assembled to do honor to their former representative. The exercises consisted only of a public reception and a few appropriate speeches, of which the most appropriate was delivered by Mr Ames himself. In his brief response to those who had preceded him, he gave in his own direct, straightforward way perhaps the most succinct description that has ever been published of the credit mobilier investigation.

"I have, as you are aware," he said, "been the principal subject of abuse for the past six months. The press of the country has been full of what is called the credit mobilier scandal. The whole offence, if offence it can be called, consists of the sale of $16,000 worth of stock to eleven members of congress, at the same price I paid for it myself, and at the same price I sold the stock to others; and if the parties purchasing the stock had simply told the truth, and said they had a right to purchase it, that would have been the end of it. But from the fact of their denial the public suspected there must be something criminal in the transaction, and to find out what the crime was, congress appointed a committee to inquire if Oakes Ames had bribed any member of congress. The result was the appointment of the notorious Poland committee. That committee was engaged nearly three months, and the result of all its labors was to badly damage the character of some men high in office for truth and veracity. The object of the committee, to see if Oakes Ames bribed any member, was admitted not proven; but the committee made the wonderful discovery that I was guilty of selling stock for less than it was worth, but that the parties taking the stock and keeping it were innocent; and that I had the extraordinary ability to give men a bribe without

their knowing it, and to do they did not know what. That is the sum and substance of the credit mobilier matter, which has kept the country in a state of excitement for the past six months."

A few weeks after the adjournment of congress the leading merchants of Boston were preparing to give a complimentary dinner, at which some public expression might be made, not only of their unshaken confidence in Mr Ames, but of their admiration of the great achievement with which his name will ever be associated. But now the end was near. To the strain which had been caused by building a highway across the continent, by sustaining it with all the force of his energy, with all his personal means and personal credit, by assuming this awful load of care and debt in a period of financial distrust and panic, were added the effects of his hopeless struggle with the members of a venal and biased legislature. And from this faulty and erring tribunal an appeal was about to be taken to him who searches all hearts, and to whom the weakness of human judgment is unknown. On the 5th of May, 1873, while suffering from an attack of pneumonia, he was stricken with paralysis. Three days later he quietly passed away from the scene of his labors and his sufferings, dying, as he had wished to die, surrounded by his family, and in an atmosphere of sympathy and restfulness that was to him a foretaste of that peaceful home where treachery, falsehood, and ingratitude may enter not.

And now at last he was appreciated—now, when the tidings of his sudden death were borne on lightning wings to every quarter of the union. Now were his eminent qualities conceded, his eminent services confessed, and everywhere were heard expressions of regret at what men felt to be a national loss, a national calamity. At the touch of death, the strife of party was hushed, the voice of calumny was silenced, and even the press, which had so long assailed him with its foul and malodorous vituperation, ceased from its accustomed strain.

In the consecrated ground, where for generations his ancestors had slept, the remains of Oakes Ames were laid at rest, in the presence of a vast assemblage of mourners, among them the leading citizens of Massachusetts, and men distinguished in every sphere of life. The exercises were of the simplest, as befitted the character of him who was about to be committed to the dust; but the scene was one which could not fail to impress beholders with the silent power of his name. "He was true to the great questions of the time," remarked the officiating clergyman, "and was through life a loyal advocate and adherent of the cause of freedom. With ample means for luxury, preserving a puritan simplicity in his home and habit of life, and by precept as by example leading the way from the extravagances of the hour that tempt so many beyond their means, and preserving the republican and majestic simplicity of the older generations, he met men on the level of simple manhood, never cowering to the lofty, and never despising the lowly. With no aristocratic ways of speech or manner that repelled the common man, but meeting all men with a simple justice, taking them as they were, his distinguishing characteristic was his massive mould and stature, that made him a mighty worker in the world's affairs."

In truth he was a great man, a man of true New England mould, one of the noblest, as he was one of the last, representatives of the sturdy puritan race. Judged by the largeness of his purpose and the greatness of his works, there are few whose career stands out in more majestic proportions, for his was a career entirely unselfish and self-devoted, busy, active, and filled to the last with thoughtful care for others. A man of deeds, and not of words, he was essentially one of the people, one with the people, treating all men as his equals, accessible to all, and judging all men on their merits, without regard to rank or station. Tolerant of hostility, he was ever ready to forgive an injury, and in his friendships he was firm and persist-

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ent, regarding them almost in the nature of a religion. In the depths of his rugged, self-contained, and undemonstrative nature lay the heart of a child, a depth and tenderness of feeling that few suspected save those who knew him. Plain and frank in speech and address, and as fearless as frank, he seldom stopped to consider his words, speaking from the heart rather than from the head, but always in apt and expressive phrase. Ambitious, but with a worthy ambition, he cheerfully assumed his self-imposed burden, and in the service of his country, on the broad foundation of his country's gratitude and his country's esteem, he has reared the superstructure of his fame.

And now from the career of Oakes Ames let us turn to that of his brother Oliver, to whom. as I have said, no less than to his more famous kinsman, was due the success of the greatest financial and engineering feat that the present century has witnessed. As president of the Union Pacific, and holding that office during the most critical period of its history, when at times its very existence was threatened, his soundness of judgment, administrative talent, and strictly conservative policy were of priceless service in carrying the enterprise through its grave and manifold difficulties. Before relating the story of his life, I will give here an extract from the resolutions passed by the board of directors, when all too soon Mr Ames was summoned from the scene of his earthly labors.

"He came into this board at a period when high character, financial ability, and extended reputation were indispensable to the company's success. His experience in great enterprises was then a matter within the public knowledge. From 1866 to 1877 he remained a director, and was president from 1866 to 1871. Throughout this long service, his name has been like a tower of refuge and strength. His faith in the capacity and future of our road, early formed, was unfaltering. In periods of financial peril, his

means and credit were most generously placed at the disposal of our treasury. His daily presence and timely word of counsel have contributed very largely to the good reputation which the company has attained. With his official intercourse with members of this board have been united acts of personal friendship which will cause us to hold him ever in affectionate remembrance.

"And to his ability, culture, wealth, station, and dignified but unostentatious manners were added the kind heart and the open hand of a Christian gentleman."

In an age when honor and integrity are as rare in business as in political circles, when bribery, defalcation, and embezzlement bring with them no more disgrace than did theft among the Spartans, except, as with them, the disgrace of detection, it is indeed refreshing to turn to a career so entirely void of offense as that of Oliver Ames. At the head of some of the most powerful corporations in the world, with power for good or evil such as is seldom wielded even by the great ones of the earth, his reputation was unsullied by the faintest breath of calumny, his life unspotted in its purity, his memory endeared to all as that of one to whom a good name was rather to be chosen than riches.

To the ancestry and parentage of Mr Ames it is unnecessary here to refer; for they have already been related in connection with the biography of him to whom has been fittingly applied the title of 'political martyr.' Plymouth, Massachusetts, was his birthplace, and the day the 5th of November, 1807. The third, in order of birth, among the sons of Oliver and Susannah Ames, he was thus about three years younger than his brother Oakes, the eldest of their eight children. At the age of six he removed with the family to Easton, where for several years, during the brief winter session, he attended school, and when not at school his time was passed, with perhaps more

benefit to himself, in his father's factory. Soon he became an expert and thorough workman, with a perfect knowledge of all the branches of his craft, and what was more, with the faculty of making improvements, where such were possible; for not least among his gifts was the gift of mechanical invention.

At the Easton shovel-works he remained, until, a few months before reaching his majority, he met with an accident, which for a time disabled him from manual occupation. He then decided to enter the academy at North Andover, where for two years he studied, gaining by his aptitude and diligence, his modest simplicity and kindliness of nature, the esteem of his fellow-students, no less than of his fellow-workmen. The taste thus acquired for intellectual pursuits he retained throughout his lifetime, never allowing the cares of business to absorb his time and thoughts, to the exclusion of nobler and loftier aims. At this early age, moreover, he had given earnest of the powers which he afterward displayed as an orator, and in the debating society of this New England village there was no more fluent or impressive speaker, none who could discourse in more humorous vein, or with a keener appreciation of a joke. And yet he was one whose native dignity could never tolerate that which savored, however slightly, of flippancy or vulgarity; nor in his presence would any dare to assume, in deed or speech, the liberty that verges upon license.

His term at the academy completed, Mr Ames began to prepare for what was then his chosen profession, of the law, entering the office of William Baylies, of West Bridgewater. But soon his health began to suffer from the effects of a sedentary life; and meanwhile his father's business had so largely increased that in 1844 he was offered and accepted a partnership in the firm, which was thenceforth known as Oliver Ames and Sons. To the executive ability of Oliver Ames, to his faculty of controlling large and

varied interests, was due in no small measure the success of these world-famous iron-works, and never afterward did he sever his connection with them, even when president of the Union Pacific, and director in a dozen railroad and other corporations.

It was early in 1854 that Oliver and his brother Oakes first gave their attention to railway building, petitioning the Massachusetts legislature, in conjunction with Howard Lothrop and other associates, for leave to incorporate a company to be known as the Easton Branch Railroad company. The petition was granted, and received the governor's approval; work was at once commenced, and in less than a year completed, and on the 16th of May, 1855, the first passenger train from Boston drew up at the North Easton station. With several local lines Oliver Ames was afterward connected, among them the Old Colony and Newport railroad, of which he was one of the original promoters, and for many years a director.

But it is in connection with the Union Pacific that his name will ever be remembered as among the greatest of railroad financiers. While yet the enterprise was struggling for its very existence, there were none so active as he in making known its merits to the public and to capitalists, while during its later progress, his experience and ability for controlling large financial operations were of incalculable benefit. Originally one of the directors, and holding that position until the day of his death, in March 1868 he was chosen president, to which office he had been appointed pro tempore nearly two years before that date. It was with the utmost regret that in 1871 the stockholders heard of his refusal to accept a reëlection, for by all it was admitted that in shaping and formulating the company's policy, and that at a most critical period of its history, his services were such as none but he could render. His work, indeed, like that of his brother, forms a part of the nation's history; for

only by such men could the vast region west of the Missouri have been made tributary to the peaceful conquests of civilization; only by such means could farms and factories have been opened, and prosperous communities established, where before was wilderness primeval. Though to Oakes Ames is due the credit of coming to the rescue of the Union Pacific in the hour of its sorest need, it was largely through Oliver's aid that his plans were carried to fruition, and the mantle of honor should fall equally on both. While the former opened the way, the judgment and administrative talent of the latter removed obstructions and made progress possible. Wherein the one was weak, the other was strong; and seldom has been witnessed a similar combination of two sympathetic and master minds intent on the execution of a grand achievement, one undertaken with no selfish aims, but for the welfare of a nation, and indeed of all the nations of earth.

To other positions of trust and responsibility Oliver Ames was elected; for his very name was a tower of strength, and everywhere his coöperation was eagerly sought. While a director in the Union Pacific, he held the same office in the Atlantic and Pacific, the Kansas Pacific, the Denver Pacific, the Colorado Central, and other railroads. Among the corporations of which he was president was the First National bank of Easton, the Ames plow company, and the Kinsley iron and machine company. He was a trustee and one of the original incorporators of the North Easton savings bank, and was connected with the Bristol County national banks, and with many similar institutions. He was also closely identified with historical, agricultural, and other societies, and especially with such as had for their object education, philanthropy, and reform. In a word, he was a public-spirited man, one foremost in all enterprises that tended to the common good.

Especially was his influence felt in connection with

the cause of temperance, a cause to which, from early manhood, he gave the benefit of his precept and example. His father was also a total abstainer, and did much to prevent the spread of the drinking habit among the community. As an inducement to his employés, the latter added to their wages the value of the liquor then usually supplied to farm hands, but on the understanding that, while in his employ, they should refrain from all intoxicating beverages. To this compact they consented, and what is more, lived up to it. It was about the year 1825 when the first temperance gathering was held at North Easton. It was largely attended, and that by an audience among whom not a few had themselves been afflicted with the curse which follows those who tarry over the cup. After an address from one of the ablest lecturers of the day, at the close of the meeting, the pledge was presented for signature; and if we can believe the local historian of North Easton, the first one to sign it was Oliver Ames. In this connection it may be mentioned that when, during his last illness, the physician prescribed champagne to support his failing strength, there was none to be had in the house; there was none in the town, and from a Boston wine merchant the needed stimulant was finally procured.

In politics Mr Ames was originally a whig, and on the dissolution of that party joined the ranks of the republicans, of whose measures and principles he was ever afterward a firm supporter. In the political affairs of North Easton, he took a prominent part during the memorable campaign of 1844, following the banner of Old Harry of the West, when Clay was a candidate for presidential honors. It was indeed an exciting year, and nowhere more so than in Massachusetts, where was one of the strongholds of the whigs, and where the great orator numbered his supporters by the thousand, the entire party working for him with true New England enthusiasm. Even the women took part in the contest, those of Taunton,

where a great convention was held in this year, promising a silken flag to the whigs of that town which should send to the convention the largest number of candidates, in proportion to their vote for governor in 1842. This banner, which is still to be seen in the Ames memorial hall, was won by the men of Easton, and at its presentation, Daniel Webster, who presided over the meeting, himself proposed the cheers which greeted their victory, Oliver Ames responding for his fellow-townsmen.

Twice Mr Ames was elected to the Massachusetts senate, first by the legislature of that state in 1852, and again in 1857 by the vote of the people, who had long since recognized his fitness to represent them in the councils of the commonwealth. As a member of several important committees he rendered excellent service, and on the issues of the day there was no more effective speaker. While not what men term a politician, and certainly not a seeker of office, he never refused to take his share in the political burdens of the time, a time fraught with danger to the very existence of the republic. In more than one campaign he delivered such powerful addresses on the topics of the hour as served to direct public opinion in the right direction. When the storm of civil war raged throughout the land, he was among the first to offer financial aid, then sorely needed, to the union cause. As one of a committee appointed by the citizens of Easton, he also disbursed to the families of those who had gone to the front the funds required for their support.

During all the long years of the war, the people of this New England village did not allow their enthusiasm to abate, adopting such measures as would best promote enlistment for the union ranks. In July 1862, it was voted to pay to each volunteer who should enlist for three years' service, and be credited to the quota of the town, one hundred dollars, in addition to the pay and bounty of the government. As

one of a committee appointed for the purpose, Mr Ames drew up a series of resolutions expressing the devotion of the community to the federal cause. Of these resolutions, which were adopted at a meeting of the townspeople, amid rounds of cheers and other evidences of approval, the following is a copy:

"Resolved, that the brilliant success that has attended our efforts in crushing this wicked rebellion inspire our hearts with gratitude, and nerve our hands to strike heavier blows for the triumph of freedom.

"Resolved, that we heartily respond to the call of the president for volunteers, believing that an overwhelming force now put into the field will make short work with the rebellion, cover our army with glory, and make our glorious republic the strongest as well as the fittest government of the world.

"Resolved, that we, the inhabitants of Easton, deeply sensible of the importance of a speedy compliance with the president's late call, although we have already made heavy contributions to the army, yet we will spare no efforts to place our quota promptly in the field.

"Resolved, that the preservation of the union and the constitution, and the crisis of the hour, call upon us to sacrifice with an untiring heart our lives and our fortunes upon the altar of our country."

While thus so largely occupied with the affairs of business and of the nation, Mr Ames found ample time for the indulgence of his literary tastes, for social intercourse, and the enjoyments of domestic life. Simple in manners as in habits, and with a dignity and refinement that stamped him as one of nature's noblemen, in his treatment of others he was cordial and sincere, without apparent consciousness of his high position, and without the slightest trace of affectation. A philanthropist in the truest sense of the word, though not an indiscriminate giver, his purse was open for every worthy object, and though the exent of his benefactions will never be disclosed, those which

are known were wisely bestowed, and such as would confer on their recipients a solid and lasting benefit. Among them were donations to schools and libraries, to churches, parsonages, and cemeteries.

To the North Easton unitarian society, of which he was a member, he presented the Unity church, built at his own expense, under his own superintendence, and dedicated in August 1875, some two months before his death. This edifice, which is gothic in design and cruciform in shape, is situated on a gentle slope, a little to the north of the Ames residence. The walls are of sienite, of a pinkish hue, and the spire, which is surmounted by a large stone cross, of blue sienite, all of it obtained from a local quarry. The interior is tastefully finished in black walnut, and the sunday-school room in cherry. Connected with the church is a chapel, with several rooms adapted for social purposes.

In the eastern transept is the Oakes Ames memorial window, designed by John A. Mitchell, the architect of the church. It is in three vertical sections, the central one representing the archangel Michael, with Satan vanquished and prostrate at his feet. On the side sections, geometrical figures are inscribed, producing an excellent effect, both as to form and coloring. In the western transept, a window in memory of Helen Angier, the late and only daughter of Oliver Ames, represents the angel of help ministering with one hand to a kneeling figure personating want, and with the other to a bowed and stricken woman, the impersonation of sorrow. Above them cherubim point to a beautiful urn, on which are the words In Memoriam. The design is by Lafarge, and by connoisseurs is considered his masterpiece, one that, except in the old world cathedrals, has never perhaps been excelled. Near by is a large white tablet bearing the name of Oliver Ames the elder, founder of the society, and placed there by his son, in memory of whom is a marble bust, with a tablet of

Mexican onyx appropriately inscribed, a family tribute bestowed a few months after his decease.

At its annual meeting in January 1876, Mr Ames presented the church to the society for which it was intended. It was in truth a princely gift, less for its value—exceeding $100,000—than for the spirit in which it was given. To superintend its building was almost the final task of his life; or rather, it was not a task, but a labor of love, in which his soul found deep content. Said he who, after a few brief months, was called on to deliver his funeral oration: "Concerning this son and brother, whose dear and honored presence we shall no more have visibly with us, one thought is in all our minds. It is, that this whole building of God, which was the pride and joy of his heart, will be his perpetual memorial. He has so identified himself with it, he is so associated with it, that it will always be suggestive of him. And if the dear ones who pass out of our sight, but do not perhaps go far away, are permitted to look down upon us and be with us here, then, next to the home of his love, this will be the place where his presence will be; and in the blessing we all receive here, we find a joyous satisfaction."

While a firm believer in the doctrines of the unitarian church, Mr Ames was in no sense of the word a sectarian, taking as his motto the two great commandments in which he who taught of God summed up the teachings of the law and the prophets. His trust in an all-wise providence was as unwavering as his faith in immortality, and in his favorite hymn, commencing

"One sweetly solemn thought,"

was expressed his own readiness to lay down the burdens of life in the sure and steadfast hope of a better life to come.

All too soon for those who knew and loved him he passed through the gates of death. In 1874, on account of failing health, he withdrew, as far as was

possible, from the cares of business life, devoting his attention mainly to the building of Unity church. For a time his health improved, and his friends began to hope that he might still be spared to them for many years; but this was not to be. On Friday, the 2d of March, 1877, he was seized with pneumonia, from which his system, enfeebled with the strain of overwork, had not the strength to rally. One week later he breathed his last, passing away quietly and almost painlessly to the rest that was to be the reward of a useful and well-ordered career. His last hours were marked by the calm resignation which arises from a blameless life, and a deep and abiding faith in the mercy of the almighty. In his inmost heart the dying man was conscious that, so far as in him lay, he had done his duty, and with steadfast hope awaited his summons before the great tribunal from which there is no appeal. Thus with the prophetic vision of those who have entered the valley of the shadow of death, when lying at the very threshold of eternity, he looked through the dread mysterious portals to the glory that lay beyond, and with his dying breath exclaimed: It is well.

Never perhaps did sorrow more universal and profound befall the community of Easton than when it was heard that the well-known form of Oliver Ames would be seen no more among them. Not only was it felt that a public benefactor had passed away, but in each individual was a sense of personal bereavement. Said the pastor of Unity church: "It was indeed a touching tribute to the beauty and strength of his character, when the sons of toil from the streets and shops, who had looked up to him and listened to his voice, and had become familiar with his daily life, gathered in sorrow and solemnity to take a farewell look of those features which, though quiet in death, still wore the winning smile of life. His temperance, his virtue, his integrity, his beneficence, his intelligent and refined courtesy, all woven into the warp and

woof of life, gave a charm to his unassuming intercourse that made his burial-day a sad one to those whom he had employed, counselled, or aided in the struggles of life."

The funeral services were celebrated at North Easton on the Monday after his decease. It was a sad and gloomy day, and the sky was overcast, as if nature herself had put on her robes of mourning. Work was suspended; schools were closed; and from all portions of the state, from all portions indeed of the New England states, men gathered to pay their parting tribute to the dead. Among them were several of the directors and leading officials of the Union Pacific railroad; from Boston, from Taunton, from New Bedford came hundreds of their most prominent citizens, his personal friends; and few there were who knew him that failed to betoken by their presence the respect which they felt for him on whose face they would look no more.

Soon after the hour of noon private services were held at the family residence, and then the remains were carried to Unity church. The pall-bearers were chosen from the oldest employés of the firm, from those who had been in their service from a quarter to half a century, the procession slowly following the casket on foot; and as it passed, the road was lined with the citizens of Easton, standing in mute and heart-felt sympathy, with downcast and uncovered head. An incident here occurred—or was it something more than an incident?—which will ever be remembered by those who took part in this mournful pageant. At the very moment when the hearse was crossing the threshold of the church which Oliver Ames had erected for service of his God, the beams of the westering sun pierced through the leaden canopy which hung like a funeral pall over the sanctuary, and like ray shot from the throne of the redeemer, shed forth their warm and radiant light, as though in benediction on the living and the dead.

The decorations were of the simplest, as befitted the character of him whose remains were now to be laid at rest. The church was tastefully adorned with flowers; on the sanctuary rail were massed the floral tributes of relatives and friends; but that which touched the hearts of all beholders was the vacant pew of Mr Ames, over the arm of which hung a single wreath of lilies.

The procession passed up the aisle to the low, soft notes of the funeral dirge, and the services began with the favorite hymn of the deceased, who, to quote from the hymn, at length had laid his heavy burden down,

"Leaving his cross of heavy grief,
Wearing his starry crown."

Selections from scripture were read by the pastor of the church, among which the following was one of the most appropriate: "Blessed are they that do his commandments, that they may have right to the tree of life, and may enter in through the gates into the city." By the same pastor, the Reverend R. R. Shippen, an address was delivered remarkable for its eloquence and pathos, yet free from extravagant eulogy, and couched in such apt and simple phrase as bore with it the conviction of honest belief. He appealed to his hearers to consider the essential feature of death rather the ascent of the spirit to heaven, than the descent of the body into the grave; not as destruction and loss, but a new life and nobler gain. "Looking thus," he remarked, "upon the higher side, as God and angels do, we shall see that the death of the good man is not darkness and defeat, but light and victory and enduring joy." During his discourse he referred to the public and private career of Mr Ames, to his character, and to the impression which he had left upon the community; for it is in that impression that men's virtues and failings are most strongly outlined.

"With all his manly strength and vigor," he con-

tinued, "there was also a refinement and courtesy which made him deserve the name of a Christian gentleman—a courtesy which was manifested not only to those who were on the same plane of social life and wealth with him, but which treated all with respect and politeness. He had a kindness of disposition that more and more opened his heart in generous service to his neighbors and his fellow-men; so that it is safe to say that no appeal for aid was ever made to him, for an object in which he could have confidence, without its securing his generous support. In these later years, with the shadow of death, or rather let me say the light of immortality, coming more consciously near to him, there was, as we have all noticed, a refining grace and sweetness of disposition, as though he were already taking on the lineaments of the heavenly life.

"To his conspicuous philanthropy was added an unconspicuous, but none the less genuine, piety; not the piety of mere sentiment, but which, growing from his unblemished integrity, was manifest in a universal belief and trust in the eternal goodness that guides the world in blessing. It was manifest by his strong belief in the immortal life; a belief that passed into an entire faith, which grew stronger and brighter with his declining years; a faith which, with the loss of health, became hope and glad anticipation. For he was one of the few persons who have embodied as part of their feeling, of their daily experience, the sentiment of the beautiful hymn that has been sung here to-day—a hymn which expresses not only the blessed faith of immortality, but readiness to lay down the burdens and ills of life; the sweet and solemn peace of a soul that seems already to look through the gates of death to the beauty and blessing that lie beyond."

After some further remarks by Mr Shippen, the services closed with prayer, and the singing of the hymn commencing Thy will be done. When an opportunity had been given to look once more on the

face of the dead, the casket was raised by the pall-bearers, and then in the village cemetery, by the side of his only daughter, near the spot where lay the ashes of his father, of his brother Oakes, and of other members of the family, Oliver Ames slept his eternal sleep.

Many were the tributes of respect paid to the deceased by the societies and corporations with which he had been connected. Among them were the Old Colony Railroad company, the Union Pacific, the First National bank of North Easton, the Massachusetts Total Abstinence society, and the Providence conference of the Methodist Episcopal church. The journals were filled with kindly notices, and men of national repute, men whose judgment of their fellowman is worthy of acceptation, spoke of him in the highest terms as one whose loss was in truth a national calamity.

Probably one of the most remarkable demonstrations was that of the citizens of Omaha, who met at the call of the mayor of that city to take appropriate action in regard to the sad event which had deprived them of one of their warmest friends. The mayor well expressed their feeling when, during his remarks on taking the chair, he said: "The people of the state whose enterprises he honored, the men of the nation whose welfare he promoted, are alike mourners over his departure. How natural, then, that we of the west, who have shared so liberally of his public spirit; that we of Omaha and Nebraska; that the people all along the vast region now traversed by the Union Pacific railroad, toward the successful and speedy construction of which he contributed so much of time, of money, of financial skill—should gather ourselves together as if by intuition to pay a sad yet cheerful tribute to that excellent worth which shone forth so preëminently and so constantly in the daily life of our departed friend. Rare, indeed, is it that goodness, greatness, and simplicity are so harmoniously blended

in the character of one man as they were in that of Oliver Ames."

The meeting then adopted the following resolutions:

"Whereas, the citizens of Omaha have lately been informed of the sudden death of the honorable Oliver Ames, of North Easton, Massachusetts, on the 9th instant, and

"Whereas, by frequent intercourse with him during the last ten years as president and director, and one of the most influential promoters and owners, of the Union Pacific railroad, we have learned to appreciate and esteem his great capacity, his public spirit, his unspotted integrity, and his fidelity to all his engagements; and are desirous of giving public expression to our admiration of his character and our regret at his loss; therefore

"Resolved, that we have heard with deep sorrow of the death of Mr Ames; that in his demise the country has lost one of its most public-spirited and patriotic citizens, and this city and state a friend deeply interested in their prosperity, and ever ready to embark his wealth in every enterprise calculated to develop our resources and promote our prosperity.

"Resolved, that, believing, as he did, that the true interest of Omaha, Nebraska, and the entire trans-Missouri country was and must be coincident with the growth and development of the business and prosperity of that great national enterprise, the Union Pacific railroad, to which he had largely devoted the last twelve years of his life, and his great wealth; and that complete harmony and mutual support were the highest and best policy of each; that being thus led to sustain, encourage, and aid the most important local railroad enterprises undertaken west of the Missouri river; such, for example, as the Utah Southern, Utah Central, the Utah Northern, the Colorado Central, the Black Hills branch of the Union Pacific, the Omaha and Republican Valley, and others in contemplation, but not yet made public—he was entitled

to and should receive the gratitude of the people of this city, and all those localities whose welfare has been commensurate with the growth of the public enterprises in which he and his associates were embarked.

"Resolved, that in the death of Mr Ames, the officers and directors of the Union Pacific railroad company have lost an associate whose name was a tower of financial strength, whose counsels were ever prudent, wise, and conciliatory, who shrank from no responsibilities, and halted at no obstacles in the advancement and consummation of the public enterprises to which he devoted himself.

"Resolved, that the employés of the Union Pacific, in the death of Mr Ames, have lost one of their best friends; one whose early years had made him familiar with the life, the trials, and needs of the laboring classes, and who, ultimately achieving an immense and varied business and great wealth, never lost sympathy with working-men; but on the contrary was ever jealous of their rights, and solicitous of their welfare.

"Resolved, that the secretary be directed to forward a copy of these resolutions to the president of the Union Pacific railroad company, and to Frederick L. Ames, Esq., North Easton, Mass., and also furnish copies to the daily press of this city for publication."

After a study of the life work and the character of Oliver Ames, we might truly say:

> "His life was gentle, and the elements
> So mix'd in him, that Nature might stand up,
> And say to all the world, 'This was a man!'"

From the private fortune of Mr Ames, estimated at the time of his death at $15,000,000, liberal bequests were made to philanthropic purposes, for public improvements, and for the cause of education and religion. Of some of them mention has already been made, and of others none is possible,

for not one in a hundred of his numberless benefactions was ever made known to the public. By his will the town of North Easton was endowed with a fund of $50,000, in the shape of eight per cent bonds of the Union Pacific, the income of which was to be devoted to the support of schools. In order to guard against the town relying too much upon this fund, and thus reducing its appropriations, it was provided that the bequest be forfeited unless a sum be voted each year at least equal to the amount contributed in the year preceding in other portions of the state. The revenue provided by the fund is used for the purchase of books and apparatus, and for the employment of teachers of exceptional ability.

For the construction of a free library at Easton, for books and furniture, and for its support, the sum of $50,000 was also appropriated, the permanent fund being afterward increased by the widow and heirs of the donor from $15,000 to $40,000. The building, which is of sienite, with sandstone trimmings, was opened in March 1883. The interior is elaborately finished, the waiting-room and reading-room in black walnut, and in the latter is a beautifully carved fireplace, with columns of red sandstone reaching to the ceiling. In the centre of the arch which surmounts it is a beautiful medallion of Mr Ames. By the terms of the bequest the property was conveyed to a board of five trustees, appointed by the unitarian society at North Easton. Their names are, Frederick L. Ames, William L. Chaffin, Lincoln S. Drake, Cyrus Lathrop, and George W. Kennedy.

A third sum of $50,000 was bequeathed for the improvement of the roads around North Easton, with the result that the appearance of the town and its suburbs has changed very much for the better. To the Plymouth monument fund was donated in his lifetime $35,000, and finally the cemetery where his remains were interred, and where his own was the first funeral service held, was purchased and laid out

at the expense of the family and under his direction. Some nine acres in extent, its walks and drives are tastefully arranged, and in the highest part of this city of the dead is the family plat, a tall pillar of granite marking the resting-place of Oakes Ames, his wife and son, and granite sarcophagi those of the first and second Oliver. For the care of the cemetery a fund was also bequeathed by Oliver Ames the younger.

Thus briefly I have sketched the career of one of New England's philanthropists; but still another phase in his career remains to be mentioned, and that is, his social and domestic life, his life as a husband, a father, and a friend, and above all, as a son. Said the Reverend L. H. Sheldon, in a discourse delivered at Unity church soon after his decease: "I can well remember the parents of the youth just ripening into manhood, and the reputation they bore in all parental and filial relations in that old homestead. There were hallowed associations and heavenly influences, that linked this manhood and boyhood, of which I have heard no public mention made. And yet those who knew as I knew that sainted mother in her own home, in her private and public Christian activities, in her steadfast zeal and prayerful interest in promoting the virtue, intelligence, and happiness of all whom her kind sympathy and influence could reach, whose deep solicitude and earnest effort for the young I often witnessed in my own father's house—could not but see that many of the graces of the mother had fallen upon the son, and her affectionate precepts and winning ways had somehow interwoven themselves into his very heart and life; so that one familiar with the life and character of the Christian mother could not enter the home of the son and enjoy the hospitalities and social delights there found, could not look upon the face, and listen to the conversation, and see the devotion of the husband and father, without thanking God that he had such an intelligent, culti-

vated, affectionate, yet firm and judicious, guide in his tender and plastic childhood. Those beautiful and ennobling traits of the mother developed into the adorning excellences which so distinguished the husband, father, and friend in the quiet of his own home, and in the refinement and social joys of his own household."

Far be it from my purpose to intrude on the sacred privacy of his family circle, even had it been my privilege to enter it; but by all to whom that privilege has been extended, it is agreed that he was a perfect exemplar of the domestic virtues, while to his associates he was endeared by his kindliness of heart, his modesty, simplicity, and cordiality. To all the members of his family their home was the happiest spot on earth, one filled with radiance and joy, and to relatives and friends it was no less attractive by reason of its refinement, its virtue, and its sympathy. In the New England village where much of his life was passed, he had not a single enemy; as a citizen, there were none more faithful to duty; as an employer, none more thoughtful and considerate. In a world full of strife and self-seeking, of envy and jealousy, his nature never became soured or cynical, and if at times his soul was chafed with the meanness and selfishness of his fellow-man, he would not else have been mortal. While associating with the most prominent men of his time, men of wealth and culture, of power and influence, his sympathies were ever extended to those of lowly condition, and especially to the poor and the afflicted. No one was more free from what may be termed the pride of station; in his intercourse with others, he treated all men as his equals, removing by his native simplicity of manner all feeling of diffidence and restraint. Only when he encountered the vicious and depraved were they made to feel their inferiority, to endure the weight of his rebuke.

In appearance Mr Ames was a man of striking presence, tall and commanding in stature, nearly six

feet in height, and of solid and muscular frame. In youth it is related that his father invited him to a friendly trial of strength, in the shape of a wrestling bout, and as nothing was afterward said of it, the presumption is that his son was not worsted in the encounter. In his face, perhaps, the most striking expression was that of benevolence, though in the lower features were indicated the strength of will and purpose which made his name respected throughout the New England states.

For more than sixty years he had lived among the citizens of his adopted town, where all paid tribute to his worth; for more than thirty he had been the guiding spirit in some of the foremost enterprises of the age—enterprises wide-reaching in their influence, and of more than national repute. But not as a railroad artificer, as a banker, as a manufacturer, will Oliver Ames be held in affectionate remembrance by his fellow-man, though for the qualities which he displayed in the conduct of affairs the world will not deny him his meed of praise. Rather will he be known as one whose name was a synonym for honor and integrity, whose hands and heart were free from all taint of pollution, who shrank from everything that savored of meanness and dishonesty, whose motto in life was: He that walketh uprightly walketh surely; who having ever before him the mark of his high calling, brought home by precept and example the truth of that noblest of maxims: A good name is rather to be chosen than riches, and loving favor than silver and gold.

In June 1833, Mr Ames was married to Sarah, the daughter of Howard Lothrop, of Easton, and niece of George Lothrop, formerly United States minister to Russia. Of thoroughly domestic habits, and one much given to church and charitable work, there are none among New England matrons whose memory is more respected and esteemed. Of their two

children, Frederick Lothrop and Helen Angier, the latter died on the 13th of December, 1882.

A native of Easton, where he was born on the 8th of June, 1835, the education of Frederick Lothrop Ames was begun at Concord, Massachusetts, continued at Phillips Exeter academy, and completed at Harvard university, where he graduated in the class of 1854, and within recent years was elected a fellow and trustee. His tastes and training inclined toward a professional career, and he would probably have followed that of the law, but for his father's wish that, as an only son, he should succeed him in his business. He therefore entered the office of the North Easton works, beginning life, not as heir at law to a vast estate, but merely as a clerk, and winning every step of his promotion by his own ability and zeal. Promotion came rapidly, however; for not only did he receive from his father a thorough business training, but also inherited from that father his aptitude for business affairs. Within a few years he was placed in charge of the accountant's department, less for his skill and accuracy in handling figures than for that prime qualification in a business man, his perfect reliability. In 1863, on the death of Oliver Ames the elder, he was admitted to a partnership in the firm, which, in 1876, was reörganized under the style of the Oliver Ames and Sons Corporation.

But long before that date he had begun to attract the attention of the business world, not only as a member of the firm, but as one engaged on his own account in some of the most promising enterprises of the day. Thus at the time when he succeeded to his father's estate, he had already amassed a goodly fortune of his own, for among all the shrewd merchants and manufacturers of New England he had few rivals, and was probably without a superior. Such, at least, is the reputation which he bore among his associates,

Fred. L. Ames

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and it is by that reputation that a man should be judged, rather than by any standard of his own.

Early in his career, Mr Ames' attention was directed to railroad matters, as might be expected from one whose father and uncle were interested in some of the greatest railroad enterprises of the age. He invested largely in western roads, in the Union Pacific, the Chicago and Northwestern, the Missouri Pacific, the Texas Pacific, in all of which, as in many others that need not here be mentioned, he was appointed to the directorate. Soon he became no less widely known as a railroad operator and railroad director than he had been as a merchant and manufacturer. First of all, his advice was sought, and then his coöperation; for men were not slow to recognize the soundness of his judgment as to the value, resources, and possibilities of the railways and railway systems of the land. Everywhere his aid was in request, and the strength of his name can best be judged by the fact that in 1890 he was officially connected with more than sixty companies, while to the list others were constantly being added, and yet he has probably refused more appointments of this nature than he has accepted. Among those in which he is most deeply interested is the Old Colony Railroad company, of which he is vice-president, and in connection with it may be mentioned the Old Colony Steamship company, in which he is a director.

In financial no less than in railroad circles, Mr Ames is a prominent figure, and especially in the control of banking and other institutions where prudence, skill, and executive ability are necessary to success. A few of them only need here be mentioned, and that with mention of the briefest. In the First National bank of North Easton, of which his father was one of the original board of directors, and for more than ten years its president, he succeeded to the latter office on the decease of Oliver Ames, in March 1877. He was also one of the first vice-presidents, and

since January 1867 has been president of the North Easton savings bank, incorporated in 1864, on the petition of his father and two others. The latter association was organized mainly for the benefit of the working classes, to encourage among them habits of thrift and industry. But there is perhaps no similar institution in all the New England states that enjoys in greater measure the confidence of the entire community. That this confidence is not misplaced, there was sufficient evidence during the commercial panic of 1879, when the general distrust extended even to the soundest of financial establishments. But the run which was made on the North Easton, as on other savings banks, speedily came to an end, for without an hour's notice at least $90,000 was paid over the counter, or nearly one third of what was then the sum total of its deposits. From a little over $300,000, in 1879, these deposits had increased to more than $800,000, in 1890, with the prospect of a steady and continuous growth, now that its able and conservative management are widely recognized. It is almost unnecessary to remark that no other reason could be assigned for the run than the proverbial timidity of the public on such occasions—a timidity that is exceeded only by their rashness when manipulators band to rob them of their hard-earned dollars in exchange for worthless stock certificates.

In the New England Trust company, in the Bay State and the American Loan and Trust companies, all of them of Boston, in the Mercantile Trust company of New York, and in the Western Union Telegraph company, he is also a director. Finally, he still retains his interest in the North Easton factory, where, under his father's guidance, he laid the foundation of his fortune and his fame.

Thus it will be seen that Mr Ames leads a busy life, and that he is also a thorough man of business. While to take a leading part in the management of all the railroad and other enterprises with which he

is connected would be a simple impossibility, assuredly he would not give to them the weight of his influence and name merely for the honor and emolument attached to such positions. And yet he not only finds time for the discharge of his manifold duties, but for the relaxations in which he takes most delight, for the society of his wife and family, for the society of his books, and at times of a chosen circle of friends; for the indulgence of his æsthetic tastes, his taste for works of art, for flowers, for bric-a-brac, and once a year, when leisure permits, for a few weeks' travel in Europe. In these, however, business is intermingled with pleasure; for in many of the old world centres of commerce he has large and varied interests.

In his business characteristics, but in that respect only, he resembles somewhat the elder Vanderbilt, and especially in his clear and comprehensive grasp of complex and many-sided questions. His office hours are passed for the most part in giving audience to those who wish to consult him, whether as to his own or others' projects. In discussing a subject he comes to a conclusion, and I need not say to the right conclusion, almost by intuition, going straight to the heart of a question in the briefest possible phrase and the briefest possible time. He is never unduly elated by success, and never unduly depressed by failure, always retaining his equanimity amid the severest friction of business affairs and business reverses. On the loss of millions he would look as calmly as did Marlborough on the havoc in his ranks at Fontenoy, or Wellington when, on the plateau of Mont St Jean, his battalions melted into companies before the onslaughts of the great Napoleon. By some he has been stamped as a cold man, one cold in heart and manner; but among those who know him best, and best appreciate him, this defect is more seeming than real. Rather should we say that he is a self-contained man, one who wears not his heart on his sleeve, who has perfect control over himself, who

while in charge of enormous interests, of property whose value is liable to frequent and severe fluctuations, was never known to betray the faintest symptom of excitement. His qualities are essentially such, though not only such, as would have made of him an excellent lawyer; but while losing an able lawyer, the commonwealth has gained a no less able financier, manufacturer, and railroad magnate.

In politics Mr Ames was originally a whig, as were his father and his forefathers, later joining the republican party, but whether as whig or republican, entirely free from all political aspirations. One year, indeed, and that sorely against his will, he served in the Massachusetts senate, the nomination being made in his absence and without his knowledge, when, as he relates, he had no more idea of being chosen to the legislature than he had of being chosen to the presidency. At first it was his intention to refuse, and he accepted only because in Massachusetts, and especially in his own district, a nomination was considered as equivalent to election. In committee work, which is the true work of a legislature, whether state or national, he rendered most valuable service, and especially in the committees on manufactures and agriculture, though thankful withal to withdraw, at the end of his term, from a career for which he had neither leisure nor inclination.

In religion he is a unitarian, taking an active part in the affairs of his church at North Easton, and of the First Unitarian church at Boston. With all his business cares, with all the ceaseless demands upon his purse, his money, and the time which to him is more than money, are ever at the disposal of charitable and benevolent associations. Especially should his services be mentioned in connection with the Boston Home for incurables, of which he is president, the Children's hospital in Boston, the Massachusetts general hospital, and the McLean insane asylum, of all of which he is a trustee. In the kindergarten for

the blind he also takes a kindly interest, and to each of these institutions devotes no small portion of his leisure hours. The extent of his public and private donations, not only for charitable but for religious, educational, and scientific purposes, it is probable that no one can tell, and least of all himself. Suffice it to say that they are generous, and as frequent as generous, the only condition being that they should never be published to the world; for publicity, in whatever shape, his inmost soul abhors. Such, it would appear, are not the characteristics of a cold-hearted man.

Following his father's example, Mr Ames has done his best to increase the beauty of his native town. Among his gifts is the North Easton station on the Old Colony railroad, one of the neatest and most tasteful structures of the kind in Massachusetts, and appreciated by the community as an ornament no less than a source of personal comfort. The building, which is of granite and brown sandstone, contains spacious aud well-appointed waiting-rooms, is surrounded by trim and well-kept grounds, and is one of the few in the United States where the comfort of passengers is consulted.

On the 7th of June, 1860, Mr Ames was married to Rebecca, the daughter of James Blair, of St Louis, a refined and accomplished lady of Virginia extraction, but whose life, since the age of girlhood, has been passed, for the most part, in the northern states. With her natural endowments, enhanced by an excellent education, she has proved herself in all respects a most suitable and worthy consort, one worthy also of the social rank to which she is entitled no less by her own qualities than by her husband's position. By rich and poor alike, she is esteemed above all for her charities, not merely for the act of giving to any who are in need, but for searching out and inquiring into the necessities of those who are suffering from sickness or other forms of affliction, and then relieving

them liberally, but with discrimination. Of the six children born of this union, three sons and two daughters still survive, whose names, in the order of their birth, are Helen Angier, now the wife of Robert C. Hooper, of Boston; Oliver, recently married to Elise A. West; Mary Shreve Lothrop; and John Stanley. The second son was named after his ancestors on the maternal side, the Lothrops, who played so prominent a part in the history of Massachusetts. In accordance with the family custom, Oliver, the fourth of that name in lineal descent, entered the office of the North Easton factory, and will probably succeed his father in that and other branches of his business, for to business his tastes and abilities incline. His education, received at the Adams academy at Quincy, and at Harvard university, was supplemented by a trip around the world.

No wonder that in his home environment Mr Ames finds most delight, though less in his luxurious winter residence on Commonwealth avenue, Boston, than in his summer abode at North Easton. The latter is surrounded by one of the most sightly estates in New England, park-like in extent, with lawns of emerald hue, studded with groups of rare and beautiful trees, and stretching in graceful vistas to the forest growth beyond. Here the atmosphere is filled with the aroma of the choicest plants and flowers, and in the midst of the grounds, skirted by arbors and shaded walks, is a beautiful lake, bordered by gently sloping meadows. In horticulture Mr Ames is one of the most expert of connoisseurs, and few even among professional botanists are so well versed in the culture of rare and exotic plants. His collection of orchids is by far the best and largest in the United States, and is not excelled by any in Europe. Of each variety he knows the name and peculiarities, and perhaps of all recreations the one in which he takes most pleasure is in watching their growth and development. The greenhouse, well stocked with palms and ferns, with

orchids and foliage plants, in all the luxuriance of tropical vegetation, is open at certain hours to the public, and in nothing do the townspeople find so much delight as in displaying its beauties to visitors, many of whom come from afar with no other object in view. Not least among its attractions is the fernery, where blocks of porous limestone, brought from the state of New York, are covered with parasitic plants, with ferns and mosses, among which rise the stately palm and the Australian tree-fern.

Still another object of interest is the gate-lodge at the northern entrance of the grounds, built of moss-covered stones of irregular shape, closely cemented together. Connected with it by a massive wall and arch of sandstone, the latter spanning the driveway, is a building used for the storage of plants in winter. On the left, not far from the entrance, is the residence of Governor Oliver Ames, and a few hundred yards beyond, across the stone bridge that spans the lake, that of Frederick Lothrop Ames, one of the handsomest and most stately structures in all the Old Bay state. Here it may be mentioned that Frederick Ames is a large owner of real estate in Boston and in several western cities, the buildings that he has erected in the New England metropolis ranking among the finest in modern architecture.

While seldom frequenting social gatherings, preferring to all other social enjoyments the quiet enjoyments of home, Mr Ames is by no means averse to society, as is shown by his membership in some of the leading clubs of Boston and New York. Five evenings at least in the week will find him at his city or country residence, and, as a rule, with no other company than that of his family and his books. For literature he has a decided taste, and while his reading covers a wide range of subjects, he loves to travel off the beaten path, to study especially the abstruse and recondite in letters and in art. With a clear and active mind, and a goodly store of knowledge, he has

decided and original opinions on the current topics of the day.

For paintings his taste is no less cultivated, and the choice collections which adorn his summer and winter residences were for the most part chosen by himself. They consist largely of pictures of the modern French school, with here and there a work by one of the old masters. Among them are some of the finest productions of Millet and Rousseau, of Troyon and Dias, of Daubigny and Corot, all of them, or very nearly so, of his own selection. His store of bric-a-brac includes many rare and valuable specimens, among them some fine old tapestries and a choice collection of jade. In all these tastes Mr Ames indulges, and indulges freely, for he has the faculty of leaving in his office the cares of that office, never carrying them across the threshold of his home. Only by adhereing strictly to this practice, by the absolute mental rest of his evening hours, is he enabled to undergo the severe and ceaseless tension of his business affairs.

To one who, without any knowledge of his antecedents, should be introduced to Mr Ames amid the retirement of his home, it would never occur that he was in the presence of a man reputed as among the greatest financiers and railroad magnates of the age. He would find in him rather the reserve and modesty of the scholar, the shyness of the scholar, or to use a more fitting phrase, the dislike which the scholar feels to any intrusion on his privacy. He would find a man perfectly self-contained and self-controlled, one whose intimacy could not be readily gained, and yet whose urbanity he could not for a moment call in question. His conversation would be of books, of pictures, of statuary, of horticulture, of anything rather than the vast and varied business interests in which he is engaged. Above all, he would find a man whose nature was singularly undemonstrative, and yet one whom none could accuse of any want of

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courtesy or hospitality, one none could mistake for any other than a gentleman by birth and education.

In physique, Mr Ames is a man of good stature, and of strong and symmetrical build, wanting only an inch of six feet in height, and with an average weight of one hundred and seventy-five pounds. The head is large and well-shaped, with intellectual and clearly outlined features, expressive of strong individuality and of the strength of purpose which has enabled him to carry so many enterprises to a successful termination. In manner he is one of the most unassuming of men, with the ease and grace and yet with the quiet dignity of one who knows his own position in the world, and knowing it, will maintain it. A man of rare business aptitude, and one whose reputation has never been sullied by the faintest breath of just reproach, he is indeed a worthy representative of the race on whose time-honored name his own will shed an additional lustre.

Thus, in as brief space as was consistent with my purpose, I have related the career of three of the most prominent members of a family world-famous for its influence, its worth, its wealth, and for the services which, generation after generation, they have rendered to their fellow-man. But without some further mention of Oliver, the second son of Oakes Ames, ex-governor of Massachusetts, and a man largely identified with the railroad interests of the west, this series of sketches would be incomplete.

Born at North Easton, on the 4th of February, 1831, Oliver received his early education at the schools of his native town and the academies of North Easton, North Attleborough, and Leicester. History was his favorite study, and especially the works of Rollin, Hume, Gibbon, and Josephus; in fiction the novels of Scott and Cooper were those which pleased him best. Completing his academic course, he entered his father's factory as an apprentice, learning the

business thoroughly in all its branches, throwing into it his heart and soul, and becoming identified with what he deemed the noblest calling in life. Thus he followed the custom of the family, for his father and grandfather had labored in the shops beside their mechanics, and by practical experience had not only learned every detail of the work, but also fully to appreciate the condition and needs of their employés. That the great firm has ever recognized the services of its workmen is shown by the fact that over half a century ago they were among the best paid and most contented in the country, while to-day no happier community can be found than that which is composed of the mechanics and their families at North Easton.

While gaining a complete mastery of his future business, Oliver was dissatisfied with his scholastic attainments, and longed for a thorough collegiate education. His father, however, did not believe in such training; for in his opinion the time that a business man spent in college could be better employed in mastering the details of his calling. It was not without an effort that the son overcame his father's prejudices; for when Oakes Ames once formed an opinion it required more than an expressed desire to gainsay it. He carefully considered Oliver's request to enter Brown university, but before granting it, consulted Dr Wayland, its president. The latter afterward remarked that Oakes Ames was one of the most remarkable men he had ever known.

At the university Oliver took a special course of instruction for one year, in logic, history, geology, rhetoric, moral philosophy, and political economy, under the immediate tutelage of Dr Wayland. He then returned to North Easton, where he again entered the shovel-works, and devoted all his energies to the interests of the firm, working for a time at his bench for mechanics' wages. He possessed the faculty for hard work, which is a distinguishing characteristic of the family, and by his close application and ability

as a craftsman, soon began to attract attention. The fact that he was the son of the proprietor had no effect upon his position in the shops, and none of the hundreds of men employed worked harder than he. His few leisure hours he devoted to study, and in factory and library carefully trained himself for his future career. His father and grandfather had won renown as manufacturers, and in this he took the greatest pride; but none the less he determined that he would not be behind them in making the name of Ames a household word wherever the husbandman turned the soil.

All the old employés at North Easton well remember Oliver as one of their fellow-toilers, and among them he bore an excellent reputation as a skilful and industrious workman. His hours at the shop were from seven in the morning until six at night, and so thoroughly did he become identified with the work that he disliked to leave it even for a single day. In the evening he repaired to the office, where his grandfather, his father, his uncle, his brothers, and his cousin, all of them interested in the business, met to discuss its affairs.

Having perfected himself as a mechanic, and obtained an insight into the management of the factory, he gave particular attention to the improvement of the machinery used in the manufacture of shovels. He invented many new machines, and increased the value of others by new devices; for he possessed in an eminent degree the inventive faculty, and what is more, the faculty of applying his inventions. Most of the medals subsequently received by the firm at fairs and exhibitions were awarded to articles made by his own hands. The father recognized the ability of the son, and as Oliver perfected himself in one branch of work transferred him to another. Thus the future governor became in course of time travelling agent for the house, and in that capacity journeyed through the greater portion of the union.

Upon the death of his grandfather, in 1863, he was admitted to the firm of Oliver Ames' Sons, the other members of which were his father and uncle, his elder brother, Oakes A., and his cousin Frederick Lothrop Ames, the interest of the grandfather having been divided among the three grandsons. For several years thereafter he supervised the internal working of the factories and had charge of the orders and sales. For this position he was admirably fitted by his ability to understand, by his persistent application, and by his practical knowledge of all the details of the business. In advancing the interests of the firm no one of the partners was more energetic than he, and largely through his efforts its reputation was sustained and increased.

On the death of his father, in 1873, affairs of the greatest moment came under his management. With his brother Oakes A. he was appointed executor of his father's estate, valued at about $6,000,000, but so encumbered with obligations, that to save it Oliver pledged his own fortune, and in other ways devised means of satisfying the immediate demands of the creditors. In the management of this property, and its rescue from an apparently hopeless condition, he displayed a capacity for finance which excited general admiration, and gained for him the esteem and confidence of the leading business men of the country. While he successfully settled in full every obligation, and satisfied every legacy and bequest which his father had willed or implied, these results were achieved only after years of energetic struggle against what at first seemed insurmountable difficulties.

The administration of his father's estate gave to Oliver an intimate knowledge of the various railroad, manufacturing, and other enterprises with which Oakes Ames had been connected. Many of the offices of trust and responsibility formerly held by the great railroad artificer were conferred upon his son,

who thus soon acquired almost as great and wide-reaching an influence as his father had exerted.

His first important success was achieved in developing the Central branch of the Union Pacific in Kansas, and this was a work in which he led and others followed. When first he took it in hand, the capital stock had not even a quotable value; its mortgage bonds, with coupons unpaid for five successive years, were selling at 30%, and holders considered themselves fortunate in obtaining even this proportion of the par value of their securities. The hundred miles of track in operation were barely paying running expenses, and the prospects were of the darkest. Oliver Ames made a thorough inspection of the road in 1877, and satisfied of the possibilities of its success, held many interviews with its managers, to whom he presented his ideas, and with them reviewed the plans and achievements of his father in relation to roads in a similar condition. His projects were adopted, and to show that he had faith in them, his subscription was among the largest recorded.

Most of the subscribers had been won by his representations; for men trusted in his ability and his integrity, and did not hesitate to risk their money upon the success of his plans. Like all strong men, he had confidence in himself, and this fact was convincingly demonstrated by his own investment. Exhaustive knowledge of all the elements of value in the undertaking, skilful management in their development, and fostering care of its interests in the period of growth, conducted the enterprise to ultimate success.

Once having entered upon the work, he prosecuted it with all the vigor for which his family is noted. The track was extended as rapidly as possible, until from being only one hundred miles in length it became three hundred and sixty. Branches were built, and business at once became encouraging, as the following statement of facts will illustrate. In 1876 and 1877 some of the shrewdest business men in New York

had been glad to sell their stock at $12 per share; in 1880, within three years after Mr Ames had assumed the leadership in the affairs of the Central branch, the property became so valuable that Jay Gould purchased of Mr Ames, acting for himself and his associates, five eighths of the entire capital stock of the company, at $250 per share. No wonder that the associates of Mr. Ames were jubilant at the success achieved by his projects and his management.

But not to the Union Pacific Central branch did he confine his efforts, becoming connected with a number of other important roads. He was president of the Sioux City and Pacific railroad. He has been a director of the Union Pacific; of the Central branch of the Union Pacific of Kansas; of the Atchison, Topeka, and Santa Fé; of the Chicago, Iowa, and Nebraska; of the Iowa Falls and Sioux City; of the Cedar Rapids and Missouri River; of the Fremont and Elkhorn Valley; of the Hastings and Dakota; of the Atchison and Denver; of the Waterville and Washington; of the Republican Valley; of the Solomon Valley; of the Atchison, Colorado, and Pacific; of the New Orleans, Mobile, and Texas; of the Boston, Hoosac Tunnel, and Western; of the Toledo and St Louis; and of many other railroads that need not here be mentioned.

Nor have his enterprises been confined alone to railroads, but include also a number of financial and manufacturing establishments. He was president of the Brayton Petroleum Motor company, and a director in the Turner's Falls Water Power company, the Maingona Coal company of Iowa, the Missouri Valley Land company, and in many other institutions. In addition to being a director of the Commonwealth National bank of Boston, of the Easton National bank, and of the Bristol County National bank of Taunton, he is a trustee of several savings banks, and has taken an active part in the organization and working of other companies. Remarkable success had

rewarded his ventures, and with rare exceptions all of the many enterprises with which he has been identified have been exceptionally prosperous.

Reference has been made to the faithful manner in which Oliver Ames fulfilled to the utmost the slightest wish of his father. With him reverence for his father's memory is almost a religion. The most cherished purpose of his life has been and is to remove from that father's escutcheon the stain iniquitously placed upon it by men who, yielding to the intense and misdirected public excitement of which Oakes Ames was the victim, subjected him, one of the most honest and patriotic of citizens, to the vote of censure passed by congress.

In memory of their father, his three sons erected at North Easton a handsome and massive building, known as the Oakes Ames Memorial hall, which they presented to the town, and which was dedicated on November 17, 1881. In honor of the event, the legislature, which was convened in special session, adjourned early in the day, to allow the governor, the speaker of the house, and many of the members to be present at the exercises. A special train ran from the city of Boston for the accommodation of about five hundred visitors, among whom congressmen, civic officials, bankers, merchants, railroad men, lawyers, ministers, journalists, and representatives of every other professional and industrial class in Massachusetts and in other states, manifested the reverence in which they held the memory of the political martyr, and their appreciation of his work and worth.

After the opening exercises, which were extremely simple, the building was dedicated by Oliver Ames, in the briefest of phrase, "to the use and for the benefit of the people of Easton." Speeches were made by John D. Long, governor of the state, ex-United States senator Boutwell, Edward Everett Hale, Thomas Russell, and other distinguished men, all of whom had known Oakes Ames and sincerely honored

him. The enthusiasm displayed at this meeting was honorable to the participants, while rendering a well-deserved tribute to the dead; for it showed that these men rejected the calumnies which the enemies of Oakes Ames had endeavored to cast upon his name, and that they recognized in him that which he really was—a public benefactor and a patriot.

The trustees of the Oakes Ames Memorial hall association have entire control of the property and its management, and the town may have "the full and free use of the premises, without payment of rent, for all the ordinary purposes of a town hall."

Mr Ames has followed the example set by his father and uncle in his generous benefactions to his native town. The supervision of the building of the new school-house, presented to the town in August 1869, by Oliver Ames and sons, devolved entirely upon him. The plan of the building and the careful manner of its construction are proofs of the warm interest he has always taken in the welfare and education of the young. As trustee of the fund left by his father for the benefit of the children of the village, he has given many evidences of his deep regard for the advancement of its future citizens. Free illustrated and scientific lectures are given weekly throughout the winter months in Memorial hall, and though these are intended primarily for the entertainment and education of the children, admission is accorded to persons of maturer years. These lectures are varied with theatrical performances, with stereopticon and other exhibitions, and all are largely attended by the people of Easton. Everything possible is done by the Ames executors for the benefit of the children. In addition to lectures and exhibitions, books and apparatus have been furnished to the schools, and the teachers of industrial classes, including sewing for girls and wood-working for boys, are paid from the Oakes Ames fund, which also supports a kindergarten at North Easton. For twelve

years Oliver Ames served on the school committee, to which he was first elected in 1858; and with agricultural, historical, and other societies he has long been identified.

In March 1886 he made a proposition, which was accepted, to give $2,000 annually for the placing of shade-trees along the highways, provided that the town appropriates yearly a poll-tax of fifty cents for the same purpose. This appropriation will add about $500 a year to the fund contributed by Mr Ames. Trees have been planted bordering many of the streets, but it will be some years before all the highways are thus improved and beautified. Mr Ames has almost a passion for arboriculture, and on his grounds at North Easton are hundreds of trees, nearly all of them planted by his own hand, many of which are rarely seen growing in the open air in this northern latitude.

When efforts were made about the year 1850 to raise the standard of excellence in the Massachusetts militia, the Ames family took a lively interest in the movement. Oliver was commissioned second lieutenant of company B of light infantry, upon its organization under charter from Governor Boutwell, in 1852, and was subsequently chosen adjutant of the battalion, which was afterwards converted into the fourth regiment of infantry, of which at later periods he was major and lieutenant-colonel. The last-named office he resigned in July 1860, after seven years of service.

Though a town officer for many years, and chairman and treasurer of the republican town committee from the organization of the party, Mr Ames did not become fully identified with political life until 1880, and then only upon the solicitation of his fellow-townsmen, and to secure from the legislature an act of great benefit to a community in which he had a temporary home. He was then accustomed to pass the heated portion of the summer months in Cottage city, upon the beautiful island of Martha's vineyard.

The people of that village considered themselves wronged by the citizens of Edgartown, which included Cottage city within its limits. Mr Ames, naturally, sympathized with his neighbors, and he also felt a personal interest in the controversy, as he owned one of the best houses in the village. An effort to obtain a division of the town was made, and to advance this purpose a committee was appointed, of which Mr Ames was made chairman. He went before the legislature to endeavor to secure the passage of a bill for the incorporation of Cottage city, but refusing to negotiate with the lobbyists, who told him that without their aid his measure would be defeated, the bill failed of passage by a small majority. The people then proposed to send Mr Ames to the state senate. At the time this proposition was made there were several candidates for the nomination in the field; but his friends did good work for Mr Ames, and he was nominated. Here it may be mentioned that the only money which he expended in endeavoring to secure the nomination was the sum of five dollars for the payment of carriage hire for one who went to a neighboring town in his behalf.

Elected state senator for the Bristol district in 1880, during his initial legislative experience he served with marked ability, especially on the committees on railroads and education. He also secured the passage of the Cottage city incorporation bill, a measure which has contributed greatly to the permanent attractions of that delightful summer resort. Reëlected in 1881, he again served on railroad and education committees.

While a member of the Massachusetts senate, Mr Ames largely extended his acquaintance throughout the commonwealth, in all parts of which he became extremely popular. He was recognized as a strong man, both on account of his ability in general affairs and his excellent reputation in the business community. Almost as a natural consequence, therefore, when the republican state convention met in 1882 to

nominate state officers, he was chosen for the second place on the ticket, which it was felt he would greatly strengthen. Although Robert R. Bishop, who headed the ticket, was defeated by Benjamin F. Butler, the democratic nominee, Mr Ames was elected lieutenant-governor by a fair majority.

So thoroughly were the attributes which entitled Mr Ames to a foremost place in public affairs appreciated by his party and the people of the state, that he was thrice in succession chosen lieutenant-governor. His services in that office were of great advantage to the commonwealth; for he brought to the performance of its duties abilities of the highest order. During this period the state freed itself of its railroad investments, selling its stock in the New York and New England Railroad company, and in the Troy and Greenfield Railroad and Hoosac tunnel. In negotiating these transactions and bringing them to a successful termination, the services of Mr Ames were especially valuable; for he was able to judge of the real worth of these properties, and of the prices at which they might be disposed of to the advantage of the community. With the public spirit which has marked his career, he so shaped the transactions that the best terms were obtained, and at the same time the state was relieved of burdens by which its people had long been oppressed.

When the republican state convention met in 1886, he received the almost unanimous vote of the delegates on the first ballot as nominee for governor of Massachusetts, and was elected by a plurality of more than eight thousand votes. Formally inaugurated in the following January, his ability and sagacity, aided by the experience he had already gained in state affairs, qualified him perhaps in greater degree than any of his predecessors to guide the ship of state.

One of the pleasantest incidents in the campaign of 1886 was the demonstration in honor of Governor Ames by the employés at the shovel works at North Easton.

It occurred in the Oakes Ames Memorial hall on the 26th of October of that year. The men all knew Mr Ames to be a trained artisan as well as a large employer of labor, and his sympathies with the working classes had often been demonstrated. The meeting was entirely in the hands of the workingmen, and was one of the largest ever held at North Easton. The president of the evening was Lorenzo B. Crockett, an engineer who had spent fifteen of his thirty-two years of life at the works, and among the speakers were Congressman Long and General John L. Swift. The list of vice-presidents included the names of men who for the greater part of their career had been employed by the Ames family, Caleb Carr, who headed the list, being eighty-nine years old, the oldest man in town, and employed continuously in the shovel-works for more than two thirds of a century. He had known the candidate for the governorship when, as grimy and hard-handed as any of the hundreds of employés, he was learning his trade before the forge. There were also many others, and those among the most enthusiastic, who had been employed in the shops from twenty to fifty years. It was a remarkable exemplification of the stability of the Ames family and its institutions. A significant indication of Governor Ames' popularity with his workmen is that he is always spoken of as Oliver. They feel that, like them, he too has earned his bread by the sweat of his brow, and that his sympathies are always with them.

At this demonstration the following resolutions were adopted:

"Whereas, the honorable Oliver Ames, whom we are proud to call our townsman, neighbor, and friend, has been nominated for the office of governor of Massachusetts; therefore

"Resolved, that, as fellow-citizens with him of the town he has done so much to benefit, as, once, fellow-workmen with him at the bench where he was equal to the best in skill and in the heartiness of personal

friendship, as employés who greatly acknowledge his uniform justice and kindness in all his relations to us, we unitedly bear our testimony to the worth of his character, the fairness of his dealings, the kind fellow-feelings which he has always manifested in his bearing and conduct toward us, and which his wealth, success, and prominent position have not in the least impaired.

"Resolved, that we are proud to vote for a public-spirited citizen of Easton, whose character and conduct we know by long acquaintance to be above reproach, a temperance man in practice as well as in theory, an able business man whose clear and sound judgment is known beyond question, a man who knows what hard work is, and has a real sympathy for the trials and regard for the interests of workingmen, and who will, as we believe, faithfully, ably, and honorably fulfil the duties of the office to which he is sure to be triumphantly elected."

Not only was Mr Ames triumphantly elected, but so satisfactory was his administration, that in the following year he was reëlected by a plurality of 17,000 votes, and in 1888 the people for the third time chose him as their chief executive magistrate by a plurality of 28,000 votes. No better evidence could be given of his personal popularity, and of the confidence of the people of the state in his ability and integrity, than this continuous and silent rolling up of the franchises of his fellow-citizens. With every month of his administration he had grown stronger. He was thoroughly acquainted with the duties of his office, and with his strong common-sense and largeness of mind, duly estimated the importance of the trust reposed in him. Though an ardent partisan, in his official action as governor party affiliations had but little influence. Fitness was the first requisite demanded; and whatever his politics, if a man were not fitted for the position which he sought, he had no chance of appointment, no matter what political or personal influence he brought to bear. Mr Ames is a wonderfully accurate judge of

men; none of his important appointments have been called in question, events having fully justified his choice, and it is now generally conceded that no governor made better selections for public office. In the transaction of business he was easily approached, and though he never forgot the respect due to his position, his manner was always free from the slightest trace of assumption. He was noted for the soundness of his judgment, the quickness of his decision, and the straightforwardness of his purpose.

His opposition to and condemnation of lobbying methods in legislation were strongly shown during the first year of his administration by his veto of the notorious Beverly division bill. This was an act for the division of the town of Beverly and the incorporation of the town of Beverly Farms. It was the cause of a fierce contest in the legislature, during which charges were made that corrupt means were being used to secure the passage of the bill. Both houses appointed committees to investigate these charges, and it was found that there had been a growing demoralization in the methods pursued for the promotion of private bills and private interests before the general court, deserving the strongest condemnation and the most effective remedy. The house committee reported that these insidious influences, "however, wherever, or by whomsoever exercised, should be most emphatically and sternly condemned"; and the house by the adoption of the report adopted this decision as its own. The senate, in like manner, by the unanimous adoption of its committee's report, declared that the methods employed in the case deserved the strongest condemnation.

Notwithstanding this denunciation, the Beverly division bill was passed by both houses. Acting upon the reports of the investigating committees, Governor Ames sensibly and honestly said: "The strongest condemnation and the most effectual remedy I can apply to corrupt methods in legislation is to veto the bill."

This he did, remarking in his message: "It appears that very large sums of money, altogether disproportionate to the honest necessities of the case, have been raised and expended in the promotion and passage of the bill. I regard it as my duty to the commonwealth, and to the maintenance of a wholesome public sentiment, which shall be above suspicion, to act upon the reports made by these committees and adopted by their respective houses, and to strike emphatically at the evil thus unearthed. Not to do so is to excuse and encourage a monstrously bad and corrupting practice." The action of the governor was warmly indorsed both by press and public.

Years ago the volume of public business became so large that the Massachusetts state house was wholly inadequate for its transaction, and numerous state officers had found quarters in various parts of the city of Boston. There had been no lack of plans for supplying the needed room, but none of them had been adopted. One reason for this hesitation and delay was the strong popular sentiment that the present state house should be maintained unchanged in its exterior proportions and finish; to do this would restrict the additional accommodation to the spot which the state government has made its home for well-nigh a century.

In his inaugural address for 1888, Governor Ames called attention to the fact that Massachusetts was expending about $50,000 annually because of the limited capacity of its state house. "I advise," he said, "that substantial additions be made to the present structure, and that its interior be thoroughly reconstructed, so that every department of the state government can be accommodated within its walls. I urge you also to secure such lands as may be desirable for the extension of the state house." He also recommended the preservation of the present building and the erection of an addition in its rear, bridging Mt Vernon street, thus providing quarters in one building

for all the state offices, as well as for the executive and legislative departments.

Thus having announced his policy, Governor Ames pursued his plan with force and persistency, though against strong opposition, until the legislature by an overwhelming vote sustained and acted upon his recommendation, appropriating sufficient money to secure the carrying out of his design. The sum of $600,000 was devoted to the purchase of the real estate required, and during the year this money was expended.

To the legislature of 1889 the governor presented plans, which were adopted, for the new and additional buildings, and that they might be carried into effect a further appropriation of $2,500,000 was made. The governor established an additional claim upon the gratitude of the people by his appointment of a construction commission. By personal solicitation he secured for that purpose three of the most prominent men in Massachusetts, none of whom were politicians or candidates for office, and all of whom enjoyed in a marked degree the respect and confidence of every class in the community. These gentlemen were ex-Governor Long, who had been one of the most popular of the chief magistrates of Massachusetts; William Endicott, Junior, one of the best known and most highly esteemed of the financiers of Boston; and Benjamin D. Whitcomb, a builder whose reputation was of the first rank. The selection of these men silenced any criticism to which the plan of extending the state house might have been subjected; for as soon as their appointment was announced, it was known that the work would be done in an honest and business-like manner and within the appropriation.

Preparation for construction was begun in the latter part of the summer of 1889, and at noon on the 21st of December following the corner-stone of the addition was laid by Governor Ames. This was the last important act of his administration, and a memorable

event in the history of the state. On this occasion he made the following pertinent remarks:

"Fellow-citizens, it is nearly a hundred years since Governor Samuel Adams, assisted by grand master Paul Revere, laid upon land bought of the estate of John Hancock the corner-stone of our state house. Thus were three names illustrious in our revolutionary annals associated with this event. It was on the 4th day of July, 1795, the anniversary of the declaration of independence, and Governor Adams spoke as follows: 'Fellow-citizens, the representatives of the people in general court assembled solemnly resolved that an edifice be erected on this spot of ground for the purpose of holding the public councils of the commonwealth of Massachusetts. By the request of their agents and commissioners I do now lay the corner-stone. May the superstructure be raised even to the top stone without any untoward accident, and remain permanent as the everlasting mountains. May the principles of our excellent constitution, founded in nature and the rights of man, be ably defended here.'

"And now, fellow-citizens, in this year 1889, the representatives of the people in general court assembled did solemnly resolve that an addition should be made to the state house, in order to provide for the vastly increased volume of the business of the commonwealth. The corner-stone of that addition I now lay upon another great anniversary, that of the landing of the pilgrims. Our state house is at once a monument to the founders of the commonwealth and to the principles of freedom, education, law, and equal rights upon which they established it. May the spirit which has made the present house eloquent with patriotism pervade the extension which we now add to it, perpetuating civil and religious liberty, pure government, and honest, manly, independent citizenship."

The completed building will not only meet and supply the wants of the commonwealth: it will represent

the ideas of Governor Ames in relation to the proper accommodation, under the conditions imposed, of those to whom the people of the state intrust the conduct of their affairs; it will constitute an enduring monument to one of the wisest, most sagacious, and successful administrations Massachusetts has ever witnessed. Incorporated with the older structure, it will be a masterpiece of architecture; it will be admirably adapted for its purposes, and amply sufficient for the requirements of many years. Had it not been for the bold and forceful stand of the governor, it is probable that many years would have passed before the state reached any solution of this question.

Early in the year 1889, Governor Ames declined a renomination, nor would he consent at that time to be considered a candidate for congress. After ably filling for three years the highest office in Massachusetts, he quietly resumed his place in private life, covered with honors, possessing the confidence and esteem of the people of the commonwealth, leaving its affairs in excellent condition, and predicting for it years of yet greater prosperity. "Essentially a manufacturing state," he said, "her principal industries are in a flourishing condition. For their pursuit there is abundant capital and all the labor that is needed. This labor on the basis of profits made is well paid, and the content of the working men and women indicates that they realize and appreciate this fact. We have good reason to expect, as a community, a continuance and increase of the many and great blessings which we have so long enjoyed."

The testimony of the press, that ready mouthpiece of public opinion, upon the retirement of Governor Ames, was an emphatic approval of his official acts. "Governor Ames closes three years of service to the state as its chief executive officer to-day," said the Boston *Herald* of January 1, 1890. "He has made a good business governor. His administration has been of a character to invite little adverse criticism,

even on the part of those who had not favored his election, and the state has prospered and received a sound and sagacious administration of the governorship at his hands."

The Boston *Journal* of the same date remarked: "For three years he has held the high position of chief executive, and while the opportunity for brilliant statesmanship has not presented itself, he has administered the affairs of the state with ability. His appointments, with very few exceptions, have been up to the high average of his predecessors. In the walks of private life he will have the best wishes of a host of friends."

"Governor Oliver Ames closes to-morrow at noon his three years' administration of the affairs of the commonwealth," said the Boston *Daily Traveller* on the first day of 1890. "He has the right to congratulate himself upon three years of able and faithful service, in which he has earned the hearty approval of the people. The three years of his administration have been marked by a steady and quiet prosperity in the affairs of the people of the commonwealth; and while there has been no great exigency which has demanded extraordinary effort on the part of the chief executive, the details of executive duties have ever been onerous when faithfully and conscientiously discharged as Governor Ames has made it his ambition to discharge them. His appointments have been above adverse criticism, and his administration has been careful, painstaking, able, and marked by the display of rare business capacity. He has in every sense proved himself worthy of a place in the long list of illustrious chief executives of Massachusetts."

In connection with the announcement that Governor Ames would not be a candidate for reëlection in the fall of 1889, the Boston *Evening Transcript* observed: "Governor Ames will retire from the position of chief executive magistrate of the commonwealth with the

cordial good-will of the people, who have seen in him a safe, reliable, and capable official actuated by a dominant purpose of subserving the public interests."

Like his father, Mr Ames is a true man of the people. Although possessed of great wealth, he is democratic in spirit and unostentatious in manner, taking no greater delight than in meeting those who call upon him. His liberality in the cause of everything that tends to moral, mental, and physical advancement is well known; his ability is beyond question; his integrity is above reproach; his public and private life are without stain. He is possessed of great personal magnetism, and more than most men, has the faculty of making and keeping friends. He has always been a strictly temperate man, and even in political campaigns nothing stronger than pure cold water could be found at his headquarters. He believes in practical restrictive methods in temperance reform, but does not think the sentiment of the people is yet ripe for a prohibitory law. His idea is gradually to lessen the evils of the liquor traffic by limiting the number of selling-places and increasing the cost of licenses. The liberality of his views is also shown by the fact that, in two of his messages to the legislature, he advocated a law in favor of suffrage for women in municipal affairs.

The governor has never aspired to be an orator, but he possesses the power of presenting his ideas in a clear, concise manner which, tempered with the humor that characterizes his public addresses, at once appeals to the understanding and draws forth the applause of his audience. In knowing how to keep touch with the public he possesses the secret of popularity.

The chief characteristics of Governor Ames from a business point of view are his courage, his admirable judgment of men and values, and his quickness in coming to a decision. In business operations he is extremely bold, and at the same time imperturbable

when affairs of great moment are under way. Nothing disquiets him; in moments of financial difficulty, when sudden calls are made on him, he has never failed to respond most promptly, and that without the slightest apparent disturbance of his equanimity. Knowing always exactly what he wants to find out about any project submitted to him, he goes directly to the point, and in a remarkably short time can acquire and thoroughly understand all the information to be had. Repeatedly has he displayed his remarkable faculty for grasping extensive and complex affairs with a celerity that is a little short of the marvellous. He has been known, for instance, to take home with him at night the published report of a great railroad corporation, and make so thorough a digest of it within a few hours, that the next day he could talk as well on the subject as the men who have expended weeks or months in preparing it. His intuitive knowledge of values has led him safely through many hazardous operations. He has never been accused of rashness, and in no sense can the princely fortune of which he is the possessor be attributed to the accidents of speculation. He is a very able mathematician, and has a thorough appreciation for details. His success in public life has been greatly due to his sagacity and his thorough knowledge of men. In his transactions he is absolutely frank and candid, never concealing anything. In a word, he is in all respects a man of comprehensive character, while in manner, there are none more affable, courteous, and friendly.

As was his father, Mr Ames is a unitarian in faith, though none of the members of his family are members of the church. His home life is an exceedingly happy one. He was married in Nantucket, on March 14, 1860, to Anna Coffin, daughter of Obed and Anna Ray, and adopted daughter of William Hadwen, of Nantucket. Of this union there are six children: William Hadwen, Evelyn, Anna Lee, Susan, Lillian, and Oakes Ames. The governor is fond of

society, and delights in entertaining his friends, whether at his summer home in Easton, or at his winter residence in Boston, where his hospitality is dispensed in princely fashion. He is a member of a number of scientific and historical societies and social clubs, and is also an ardent lover of art, music, and literature, his house containing many a masterpiece of painting, sculpture, engraving, and ceramics. He has been president of the Boston art club, and also president of the Merchants' club of Boston.

Finally, it may be said that Oliver Ames represents all that is best in American citizenship, and that his career is one of the most conspicuous illustrations of the possibilities open to one who commenced life in a comparatively humble sphere, and by thrift, industry, and stability of purpose worked out an honorable ambition. In such men the republic finds its strength. Citizens of sterling worth are needed to make our government possible, and when such men are found, state and nation place on them the stamp of their approval.

Mr Ames is in truth of a large-hearted race, with ideas broad enough to comprehend the needs and possibilities of a continent. The world is better; the union of these states is stronger; Massachusetts is richer in all that makes her great, and strong, and good; there is less of want, less of woe, and more of hope and courage—because the Ameses have lived.

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